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Employee -driven sustainability performance assessment in public organisations

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Abstract

Organisations are increasingly adopting sustainability performance assessment tools. However, these formal organisational sustainability assessments tend to be only managed and prepared by technical staff. There is a lack of research on approaches that enable a stakeholder-driven performance assessment. This research aims to develop a framework of informal/complementary stakeholders-driven sustainability performance assessment, supported by employee's voluntary collaboration. This framework aims to be integrated in the formal sustainability assessment. It reflects a checklist composed by questions covering the main sustainability domains evaluating "Perceptions", "Individual practices" and "Voluntary monitoring indicators" (qualitative data voluntary collected by internal stakeholders). The developed checklist was evaluated in a participatory workshop to collect contributions of employees from a public organisation, used as an exploratory case study. The *reliability* evaluation of the framework has shown lower scores compared to the other two criteria, *understanding* and *usefulness*. This research shown a novel way of integrating employees inputs for informal sustainability assessment and support the importance to empower their role in public organisations and to increase their understanding about sustainability management frameworks.

Keywords: sustainable development, performance assessment, public organisations, internal stakeholders, empowerment.

1. Introduction

The research and development of sustainability assessment frameworks gained special importance in the 90's (Singh, Murty, Gupta, & Dikshit, 2009). The evaluation of sustainability performance has typically been focused on private companies, and their corporate reporting schemes (Enticott & Walker, 2008; Walker & Brammer, 2012; Williams, Wilmshurst, & Clift, 2011). However, there has been a growing interest to integrate sustainability informed strategies into the public sector (Brammer & Walker, 2011; Enticott & Walker, 2008). The public sector represents an important component of economic

activities, so the integration of sustainable development principles and practices into government processes is crucial towards national and global sustainable development goals (Ball and Grubnic, 2007; GRI, 2005; Walker and Brammer, 2012). In addition, public organisations are major employers, providers of services and consumers of resources (GRI, 2004) which is associated with significant aspects and impacts.

Public organisations want to perform well and be good examples for different stakeholders such as peer organisations, clients, voters, overseers and other environmental actors (Askim, 2011). According to Freeman (1984), stakeholders need to be involved in the organisation such that mutual interests can be accomplished, because they have the capacity to influence the organisation and other stakeholders. Organisations that voluntary contribute to environmental issues in the sequence of stakeholders' influences show a commitment towards environmental concerns (Gadenne, Kennedy, & McKeiver, 2008).

Encouraging stakeholders' participation in sustainability performance assessments can produce data in a voluntary and informal way that can be compared with formal assessment frameworks and at the same time complement and enhance it (Ramos & Caeiro, 2010; Ramos et al., 2014). Complementing the formal performance information with stakeholders' judgement may contribute to get better results. Organisations perceived with good performances but that do not make efforts to improve, may put their reputation in risk (Jaeger, 2011). On the other hand, organisations that make efforts to accomplish good performances but which efforts are not perceived by society may show a lack of communication with their stakeholders. Hörisch, Schaltegger, & Windolph (2015) suggest that increasing the communication between the organisation and stakeholders decreases stakeholder criticism on sustainability-related issues.

Despite the existence of some works on stakeholders' voluntary initiatives, there is a lack of research on approaches that enable a stakeholders-driven performance assessment, in particular for organisational internal stakeholders like employees. Employees have an important stakeholder role with a relationship with the organisation of ownership, sentiment and exposure (Mitchell, Agle, & Wood 1997). According with the same authors, stakeholders can have different powers, legitimacy, urgency and salience attributes (degree to which managers give priority to competing stakeholder claims). Formal organisational sustainability performance assessment tends to be only managed and prepared by technical staff. According to Sierra-García, Zorio-Grima, & García-Benau (2015), organisations have showed an increasing interest on stakeholders needs, disclosing information on a voluntary basis. However, organisations generally assume that stakeholders' needs and expectations are satisfied through the information that is provided in a top-down process, or at best, stakeholders are only consulted after the performance assessment process is finished. Organisations still need to continue their work in order to go beyond stakeholders' current passive role as observers of assessments already finished. In this perspective, including them in organisational management procedures is fundamental (Parmar et al., 2010). This research aims to develop a conceptual framework to support employees-driven sustainability performance assessment in public organisations that will complement the formal performance assessment system. A participatory process with employees of a public organisation was used to evaluate the proposed framework.

2. Literature review

Decision-making should be flexible to changing circumstances and include a variety of knowledge, beliefs, behaviours, motivations and values, which is only possible through stakeholders' participation and which could be very difficult to come up in other way (Morrone & Hawley, 1998; Reed, 2008). Promoting participatory processes as a management and planning framework could lead to long term organisation's success and allow to (Reed, 2008): i) decrease stakeholders' exclusion of relevant organisational procedures; ii) increase stakeholders' trust on decisions that are taken; iii) increase knowledge through perceptions gathered by stakeholders; and iv) improve decisions' quality based on more complete information.

In the public sector, participatory approaches can be used as community-based performance assessments. They allow citizens' involvement on public sector performance assessments of local government programs, strategies applied to community development, expected goals, selection of performance indicators, performance criteria and results monitoring (Ho & Coates, 2001). The participation of citizens' in the development of local policies development, collection of data and presentation of results enables public organisations to provide services of interest to the community (Holzer & Kloby, 2005). On another hand public organisation, can use frameworks like the Common Assessment Framework (CAF) as a self-evaluation framework developed for the European level (CAF, 2015), allowing public sector organisations at every level to get better results on their performances. Analysing several evaluation criteria like leadership, people, planning, strategies and results, and including stakeholders' inputs in the evaluation by answering questionnaires leads to a more complete and robust assessment. The questionnaires ascertain the internal stakeholders' perceptions and satisfaction levels with the public organisation (CAF, 2015). An organisation perceived as having low performances may compromise its image and its social responsibility. Mzembe (2016) presents different stakeholders' engagement approaches that can be adopted by organisations in the context of corporate accountability. One of those examples is from Mitchell, Agle, & Wood (1997), according to whom, depending on the role, typology and attributes, stakeholders can make an important contribution on the dynamics and performance of the organisation. Decisions may affect a variety of stakeholders and they influence the achievement of organisational plans (Waligo, Clarke, & Hawkins, 2014). Therefore, understanding internal stakeholders' perceptions can be beneficial for long term growth (Liphadzi & Vermaak, 2015).

Employees' contribution in the sustainability performance assessment process is highly dependent on their sustainability perception. Perception can be defined as the process that involves stimuli recognition and individual interpretation of the environment that surrounds them (Rookes & Willson, 2000). The employees' perceptions on sustainability performance allow the recognition and interpretation of these agents about the organisation's efforts in adopting strategies, principles and sustainability practices (Jaeger, 2011; Costa and Menichini, 2013). In the same way the employees' predisposition to adopt sustainability practices in their workplace can influence the organisation capability in obtain good performances (Boiral, 2008). Employees will be more willing to engage in voluntary environmental initiatives if they have the support of their supervisor (Paillé, Boiral, & Chen, 2013). Sustainability issues related to organisational performance are relevant and should be recognized as real concerns to stakeholders (Clarkson, 1995; GRI, 2013).

Stakeholders' engagement in sustainability assessment initiatives can be used as an indirect way of evaluating its strengths and weaknesses as well as its overall utility and societal value, since the higher the stakeholders' involvement the better is the operationalization of the initiatives (Mascarenhas, Nunes, & Ramos, 2014; Moreno Pires & Fidélis, 2012). For instance, Mascarenhas et al. (2010) formulated a conceptual framework for common local

sustainability indicators within a regional context, where a participatory approach gave important support and inputs for the framework development. Sustainability indicators have been considerably used by different professionals and became a key tool to measure sustainability (Bell & Morse, 2008). Sustainability indicators allow to measure and communicate the state and progress of sustainability aspects, being one of the approaches most used to measure sustainability performance (Ramos, 2009), and to improve the dialogue with stakeholders (Ramos & Moreno Pires, 2013).

Participatory approaches and inclusion of data collected by stakeholders in performance assessments became an organisational challenge to improve its sustainability performance management. Voluntary monitoring is one of the public participation ways used in environmental problems' assessment (Hunsberger, Gibson, & Wismer, 2005). This approach is a locally/community-based approach where citizen groups voluntarily collect data in order to evaluate environmental quality parameters (e.g. water quality, ecosystem health) (Ramos et al., 2014). It was initially associated to water systems conservation programs such as estuaries (Ohrel and Register, 2006) and wetlands (USEPA 2000, 1997). Since most volunteers are non-specialists, the parameters commonly analysed are easily recognizable depending on citizen perceptions about the body of water like colour, turbidity, odour, algae blooms and sources of pollution (Lee, 1994). Voluntary monitoring allows governments and agencies responsible for ecosystems monitoring programs to overcome spatial and temporal failures of monitoring systems as well as to promote a better environmental awareness between volunteers (Silvertown, 2009).

3. Methods

3.1. Development of the stakeholders-driven sustainability performance assessment checklist

The framework was developed using a checklist based approach, built on questions for sustainability performance assessment applicable to public organisations, and aiming to complement formal assessment pursued by the organisation. A checklist method is a behaviourally based approach to performance appraisal that requires raters to observe, ratees' behaviour and record performance related judgments about these behaviours (Cooper, 2017). The developed question topics are meant to be addressed to internal stakeholders, namely public organisations' employees. Supported on the literature review, the checklist intended to include questions divided in tree main categories: "Perceptions", "Individual practices" and "Voluntary monitoring indicators" (Figure 1).

<Figure 1 here>

The checklist is based up on close-ended questions using a Likert-scale ranging for the majority of the questions. Close-ended questions have the advantages of clarifying the meaning of a question and being easy to complete for respondents, as well as being easy to process and enhance the comparability of answers (Bryman, 2008), what is appropriate for the internal stakeholder's assessment. As previously mentioned, it has three categories of questions – "Perceptions" on organisational performance, "Individual practices" that may impact the organisation, and "Voluntary monitoring indicators"– covering the main sustainability domains – Economic, Environmental and Social. A fourth category was also included – General questions. It aimed to analyse the perception level of the employee about general aspects of the organisational management. Perception levels were defined as: Very Weak, Weak, Medium, Good and Very Good (see Table A.1). The research aimed to

establish a direct or indirect association between the core performance indicators and practices defined in the formal sustainability performance assessment model conducted by the organisation. The design of the questions for the checklist were defined base on scientific articles, guidelines and practices related with organizations' environmental and sustainability performance assessment, e.g. Ameer & Othman (2012), Boiral & Paillé (2011), Deloitte (2008), Government of Canada (2000), GRI (2013), Institute for Local Government (2013), Le, Vu, Hens, & Van Heur (2014), Lee, Park, & Lee (2013), Lee (1994), MORI Social Research Institute (2002), New Zeland Government (2011), USEPA (1997, 2000).

3.2. Selection of criteria by an exploratory case study organisation

A participatory workshop was lead in a Portuguese public organisation – General Directorate of Arms and Defence Infrastructure (DGAIED) belonging to Portuguese Ministry of Defence (MDN). DGAIED was used as an exploratory case study to evaluate the proposed framework. Case studies are useful when an extensive and "in-depth" description of social phenomena is needed. The existence of a poor knowledge base, few literature to provide a conceptual framework or hypotheses of note regarding stakeholders-driven assessment justifies the need to conduct an exploratory study, as discussed by (Yin, 2009). The DGAIED was a partner of this research and its leaders were engaged in collaborating with the research team. In addition, this organization already collaborated in other earlier team research studies related with organisational sustainability, demonstrating the appropriateness and reason of its choice (e.g. Ramos et al., 2007). So, convenience and judgmental sampling was selected in this exploratory case, which mean simply available to the researcher (Saunders, Lewis, & Thornhil, 2012).

In a first stage, the participatory workshop aimed to evaluate the proposed framework, including an individual checklist scoring using an ordinal scale system. Three initial framing questions were made in order to determine the usefulness and impact of this framework in the organisational management and the possible employees' availability to participate in the framework's implementation in practice. Then, each question from the checklist was evaluated taking into account three criteria: the "Understanding", "Usefulness" and "Reliability" of each question, according to adapted procedure of Ramos et al. (2007). The participatory workshop meant to enhance the robustness and quality of the framework (Reed, 2008). Each question was scored using a Likert-scale from 1-Very low to 5-Very high (1-Very low, 2-Low, 3-Medium, 4-High, 5-Very High). Also, a commentary section enabled the inclusion of participants' qualitative assessment for each question.

In a second stage of the workshop a focus groups session took place, considering the definition of focus group presented by Saunders, Lewis, & Thornhil (2012), a group interview that focuses upon a particular issue, where interactions and responses are both encouraged and more closely controlled to maintain the focus. It promoted the participants' discussion and interactivity about the preliminary checklist as well as its weaknesses and strengths' identification. Different reasons can be pointed out to conduct a focus group method. In this research it was used because participants have had a certain common experience (the evaluation of the preliminary checklist), so they could be interviewed in a relatively unstructured way about that experience, where the emphasis is upon interaction within the group and the joint discussion of the theme (Bryman, 2012).

Each group had 3-4 people. The number of people in each group depends on the theme of the workshop, usually varying from 4 to 8 people (Saunders, Lewis, & Thornhil, 2012). The workshop had a total of nineteen participants. The participants of the workshop were selected according to a convenience non-probability sampling technique, meaning a selection of sampling on the basis that they are easiest to obtain and in which the change or probability of

each case being selected is not known (Barnett, 2002). It was held in DGAEID in September 2014.

3.3. **Data Analyses**

Exploratory analyses were conducted using descriptive statistics. The sample was characterized by age, gender and professional category. The results for the three criteria used in the participatory process were characterized using the scores' average, standard-deviation and coefficient of variation, taking into account the statistical assumptions defined by Tullis and Albert (2013). Scores were then assigned by: i) employee's age (equal and less than 40 years old and more than 40 years old), ii) checklist evaluation criteria ("Understanding", "Usefulness" and "Reliability"), and iii) question's category and sustainability domain.

The final checklist was drawn taking into account three aspects: i) cut off of questions with average value scores equal or less than 4.0 by the participants in the workshop, allowing in this way selecting only the questions better scored by the participants (i.e. score equal or higher than *High* - 4); ii) participants' qualitative inputs about the preliminary checklist; and iii) experts' qualitative assessment (ten elements, composed by senior and junior researchers, from different nationalities and with experience and background in organisational sustainability, indicators and reporting, performance evaluation, stakeholders participation and public administration). The participants' qualitative inputs (written comments) followed a qualitative content analysis procedure according to Bryman (2012). This analysis allowed finding questions that were identified by the participants, as not clear, repeated/redundant or less relevant, and therefore needed to be reformulated or deleted. The expert judgement (iii) allowed at the end to balance the quantitative assessment (i) with the qualitative one (ii), and consolidate the final checklist.

There are limitations associated with exploratory case studies and focus groups research design, namely validity, reliability, lacking of transparency and generalizability (such as those associated with participant and observer error and bias) (Saunders et al., 2012; Bryman, 2012). For example, shyer participants do not speak up and cultural factors shape the opinion of the group and form barriers to present individual disagreements, namely related to hierarchical tradition, what could limited the richness of the inputs for the proposed framework and checklist. Those limitations were weighted in the discussion of the results, namely at the expert qualitative assessment, and when drawing conclusions.

4. **Results and discussion**

The preliminary checklist evaluated in the DGAIED workshop was composed by 85 questions, organized by sustainability domain: (i) general issues: 4 questions; (ii) economic: 7 questions; (iii) environmental: 53 questions; (iv) social: 21 questions (see table A1). The majority of checklist's elements belong to the "Perceptions" category (76%), followed by "Individual practices" (14%) and finally the "Voluntary monitoring indicators" (9%) (**Error! Reference source not found.**).

<Figure 2 here>

The participants' average age was 44 years old. The minimum and maximum ages were 29 and 61 years old, respectively. Eleven male employees and eight females participated in the workshop. There were twelve practitioners and intermediate decision makers (with higher education studies), two sergeants and five military officials.

The majority of the participants agree (ten agree and seven totally agree) with the existence of a stakeholders-driven sustainability assessment framework, revealing its perceived

importance and generally acceptance. These participants also showed availability to collaborate in an assessment process using the proposed framework. In fact, stakeholders like to feel integrated in performance measurements since when they are engaged in the design, implementation and usage of performance assessment frameworks, the decision-making is more credible reflecting stakeholders' concerns, expectations and opinions (Ho & Coates, 2001; Reed, 2008). The remaining two participants were sceptical about the framework.

The majority of the participants considered the framework's impact in the organisational management and decision-making from moderate to high. Two answers revealed a low impact, none participant stated a very low impact and only one a very high impact (Figure 3).

<Figure 3 here>

Although the importance employees gave to the framework, few revealed indeed confidence when questioned about the practical impact of the framework in the organisational management and decision-making in the organisation. Employees have doubts about the frameworks' weight in the global sustainability performance management and assessment, as well as its effective influence in the organisational activities, which justify the results. Nonetheless practical initiatives carried out by employees in their workplace can significantly improve organisational sustainability performance (Paillé et al., 2013), despite their general scepticism towards playing an active role in the organisational management. A stakeholder by giving importance and showing interest in sustainability issues is a first positive step towards implementation of an effective cooperation between stakeholders and organisations.

The participants considered the employees-driven sustainability assessment framework as an *understandable* and *useful* framework, assigning 'high' scores (4.0) for the majority of the questions (see Table A1 – Appendix). The participatory workshop was initiated with a brief presentation of the research project and the aim of this specific workshop by the research team. One may suggest the fact that the participants knew that experts had drawn the preliminary list, what may had influenced the high scores given. In addition, the background of the participants (not inquired) may have had also an influence in the results. Nonetheless, the *reliability* criterion was scored as moderate (3.0) for the majority of the questions. Similarly, to the participants' qualitative assessment (comments), the reliability was identified as one of the major weaknesses of the checklist framework. Neither the analysis by sustainability domain nor the analysis by questions' category revealed discrepancies in the scores assigned. In general, all the scores assigned were consensual between participants, reflected in low coefficients of variation.

Although participants assigned with high scores to the *understanding* criterion, during the participatory workshop many doubts arose between participants about concepts and technical meanings. Still qualitative inputs were collected in the focus group session, which enriched the final checklist and at the same time contributed to a feeling of ownership in the process by participants. In fact, people involved in the selection and development of indicators – in this case checklists' questions – are more willing to participate effectively and affect administration decisions and operational actions (Moreno Pires & Fidélis, 2012). As stated before, the majority of the employees are willing to collaborate in the framework implementation, answering the checklist in a real sustainability assessment scenario.

The *reliability* criterion of the checklist has shown lower scores for the majority of the questions compared to the other two criteria (*understanding* and *usefulness*). According to the participants, an employee who answers the checklist in a real assessment may provide skewed answers, since individuals tend to convey an image of exemplary or compliant employee. Once data should be collected anonymously could mitigate part of this problem.

Nevertheless, and as discussed by (Mascarenhas et al., 2010), although there is a growing interest about sustainability domain issues, only few initiatives show practical results Justifying the scepticism observed about the framework's reliability, as it was stressed before, there is a common gap between sustainability perception and organisational sustainability practices (Jaeger, 2011) which justifies the passivity to turn actions into real practice. For example, in the environmental domain, that can be reflected in several practices like eco efficiency and recycling initiatives, positive environmental attitudes may not necessarily translate into proactive behaviour (Gadenne et al., 2008), and this does not prevent employees from responding unfairly.

The results of the checklist assessment showed some differences between participants' age groups. Although the score average was generally identical, there were differences between each sustainability domain. In the environmental domain's questions, the participant's aged equal and less than 40 years old revealed score averages slightly higher than the ones aged with more than 40 years old. Issues like waste management, energy, materials and water consumption were better scored. On the other hand, for the social domain's questions, the participants aged with more than 40 years old showed score averages slightly higher than the other domains. Work conditions were one of the major concerns of older employees, reflected in higher scores. Although some authors noted that younger people report less concern with the environment (e.g. Gadenne, Kennedy, & McKeiver 2008), other authors showed different findings consistent with the ones accomplished in this research, e.g. (Paillé, Boiral, & Chen, 2013). In addition, some researchers (e.g. Clarkson, 1995) brought together a range of issues from different studies that put as major employees' concerns organisational aspects essentially related to work conditions and career progression. The fact that older employees are the ones most concerned with social aspects at the workplace may be influenced by age, work maturity and a better knowledge about organisational dynamics. These results stress the importance of covering the different group ages when engaging and surveying the stakeholders in the proposed performance assessment approach.

After the cut off criterion application (score average above 4.0), the checklist was reduced from 85 to 42 questions. But this purely quantitative assessment promotes inconsistency between the checklist's elements, since it does not ensure full coherence and representativeness of the sustainability domains and question categories. Consequently, the workshop participants' scoring, with the majority of the responses between the mid to high scores (averages are between 3.4 to 3.9 with a standard-deviation between 0.4 and 1.2), needed to be qualitatively revaluated. Therefore, to improve this result, a qualitative analysis was conducted based on the participant's qualitative inputs (focus groups session's results and individual commentaries) as well as experts' opinions.

From the qualitative assessment, the major strengths identified were: i) the framework's relevance for organisational management; ii) the empowerment of stakeholders' role in the sustainability assessment process; and iii) the relevance of the sustainability domains presented in the preliminary checklist. As weaknesses it were identified: i) the low reliability of employees' answers due to a potential biased behaviour; ii) the uncertainty about the stakeholders real role's within the sustainability performance assessment framework; iii) the low employees' knowledge about basic sustainability concepts and technical language that may difficult the checklist fulfilment; iv) the excessive number of questions in the checklist and v) some questions' redundancy.

All these qualitative inputs contributed to the checklist reformulation taking into account four major aspects: i) irrelevancy, ii) redundancy, iii) extension, and iv) complexity of some questions, which for that reasons were eliminated/reformulated (for example questions G3,

S3 and S5 were simplified/clarified). After the analysis of qualitative inputs by employees and experts' assessment, the final checklist was reduced in 28%, with a final number of 61 questions (2 general, 5 economic, 37 environmental, 17 social). The "Perceptions" category remains the largest one (69%), followed by "Individual practices" (20%) and "Voluntary monitoring indicators" (11%). (Figure 2, and Table A1 - Appendix).

The general questions were reduced from four to two because they were considered by the participants too long, redundant and with too many technical terms. Nevertheless, the remaining questions encompass the aspects highlighted in the other two. The economic domain is composed by questions that are consistent with Global Reporting Initiative (Silvertown, 2009) findings of relevant topics, identified by public organisations' stakeholders, like transparency on public funds and assets management. Relatively to the environmental domain, which has the largest number of questions, the existence of associations between categories of questions justified the need to include inseparable sets of questions. For instance, the association between the "Perceptions" and "Individual practices" categories, since it could result in relevant data about the image those employees have of themselves in adapting sustainable practices in their workplace.

Comparing the framework developed in this research with Clarkson (1995) findings and the European Common Performance Assessment (CAP) framework for public organisations (Julnes, 2011) (that applied questionnaires to employees), it should be highlighted that these two works have a greater focus on perceptions on social issues, related with global satisfaction with the organisation, its management and work conditions. These two works lack an integrated sustainability perspective and the interlinking approach represented by the association among the three main dimensions here explored, "Perceptions" on organisational performance, "Individual practices" that may impact the organisation, and "Voluntary monitoring indicators", that are organisational performance data gathered by the employees. These are the keys issues that the adopted final checklist kept to guarantee that employees' main concerns are asked and assessed.

The use of the framework developed in this research can contribute to employees having a stakeholder role less latent and dormant, but more dominant and definitive (according Mitchell, Agle, & Wood (1997) stakeholder's typology and attributes), meaning that they are effectively perceived by managers, so able to contribute to the improvement of the sustainability performance of a public organisation.

In addition the complementarity between a formal performance assessment system with a voluntary and informal one based on stakeholders' inputs, may contribute to rethinking the approaches to manage organisational sustainability performance, and to empower stakeholders through voluntary collaborative contributions, namely their perceptions, individual practices and voluntary monitoring measures. These can be evaluated through indicators that assess the employees' voluntary collection of data by direct observation of the organisation's facilities. The use of indicators has been generalised in this field since it consists in a robust, less bureaucratic and meaningful tool to evaluate, compare and communicate sustainability performance of the public sector (Domingues, Moreno Pires, Caeiro, & Ramos, 2015). Also stakeholders' assessment can be used as an indirect way for formal results evaluation, allowing for cross-validation (Ramos et al., 2014), evaluating the strengths and weaknesses of technical indicator sets and drawing conclusions about its overall utility and societal value (Mascarenhas et al., 2014).

5. Conclusions

Stakeholders' evaluation on sustainability performance of organisations is an important contribution to their active engagement in the overall assessment process and to help managers to take actions in order to achieve the expected objectives. A sustainability performance self-assessment by the internal stakeholders (employees) could also be particularly useful to cross informal and technical outputs and outcomes. In this research an innovative framework of employee-driven sustainability performance assessment is proposed that can be used in a public organization. This framework is based on a checklist where employees evaluate the organization through three complementary ways: "Perceptions" on organisation performance, "Individual practices" and "Voluntary monitoring indicators". The framework was evaluated in an exploratory case study, a Portuguese public organisation, and assessed by an international expert panel.

The evaluation of the framework allowed to see that employees can have low knowledge about basic sustainability concepts uncertainties about their practical role within the sustainability performance assessment. So, education and training activities on sustainability aspects are needed and should integrated in the organisation, previous to internal stakeholder's engagement on the performance assessment. Also it is important to engage employees from all the age's groups, since age can influence their sustainability perceptions.

The reliability of the framework when put into practice was the major constraint identified since stakeholders may provide unreliable answers, compromising the confidence level of the stakeholders-driven sustainability assessment framework. As a future recommendation anonymous participation may be needed in order to increase reliability of informal assessment results, but making sure that the accuracy can be confirmed by a third party.

A research limitation has to do with the participatory workshop outputs and its data treatment. The replacement of ordinal scales by qualitative weightings could result in a better assessment, giving preference to more interactive and less formal methods, where each checklist element is analysed with more time and accuracy, identifying its strengths and weaknesses. Additionally, the different backgrounds of the participants in the workshop may have influenced some of the scores given, which was not evaluated. Nevertheless, as an exploratory study, this research intended to evaluate if an informal assessment by employees of a public organisation could take place. The workshop gave a positive feedback as showed in this research.

This research shown a novel integration of internal stakeholders inputs for informal sustainability assessment and support the importance to empower their role in public organisations and to increase their understanding about sustainability concept and its management frameworks. The developed checklist will allow the comparison of the results produced by stakeholders' self-assessment of sustainability with formal sustainability performance assessment and be used to complement the evaluation of sustainability aspects. Also it will encourage the organisations to rethink current management and assessment models. The availability and acceptability not only from internal stakeholders but also from the public organisation are key-factors to enable the implementation of this framework. The proposed sustainability performance assessment framework, including the checklist can be used by any public organisation and intends to contribute to the rethink of current management and assessment models. As future developments the framework should be applied in world wide public organizations, so continuous improvements can be made. Adaptations and application to private organizations can also be explored.

6. References

Ameer, R., & Othman, R. (2012). Sustainability practices and corporate financial performance: A study based on the top global corporations. *Journal of Business Ethics*, *108*, 61–79.

Askim, J. (2011). Determinants of Performance Information Utilization in Political Decision Making. In W. Van Dooren & S. van de Walle (Eds.), *Performance Information in The Public Sector: How it is used*. Palgrave Macmillan.

Barnett, V. (2002). *Sample Survey Principles and Methods* (3rd Editio). John Wiley & Sons, Inc.

Bell, S., & Morse, S. (2008). *Sustainability Indicators: Measuring the Immeasurable? Second Edition Earthscan.London.Sterling,VA* (Second Edi). London and Sterling, VA: Earthscan. https://doi.org/10.1016/S0743-0167(99)00036-4

Boiral, O., & Paillé, P. (2011). Organizational Citizenship Behaviour for the Environment: Measurement and Validation. *Journal of Business Ethics*, *109*(4), 431–445.

Brammer, S., & Walker, H. (2011). Sustainable procurement in the public sector: an international comparative study. *International Journal of Operations & Production Management*, *31*(4), 452–476.

Bryman, A. (2012). *Social Research Methods* (second). New York: Oxford University Press.

CAF. (2015). *Common Assessment Framework. Retrieved from: http://www.caf.dgaep.gov.pt/ (September 2014)*.

Clarkson, M. (1995). A stakeholders framework for analyzing and evaluating corporate social performance. *Academy of Management Review*, *20*(1), 92–117.

Cooper, C. L. (2017). The Blackwell Encyclopedia of Management. Blackwell Publishing. Blackwell. Reference Online. 27 April 2017 URL: http://www.blackwellreference.com/public/book.html?id=g9780631233176_9780631233176>

Costa, R., Menichini, T. (2013). A multidimensional approach for CSR assessment: The importance of the stakeholder perception, Expert Systems with Applications, 40 (1), 150-161Deloitte. (2008). *One Size Fits Few : Using Customer Insight to Transform Government*.

Domingues, A. R., Moreno Pires, S., Caeiro, S., & Ramos, T. B. (2015). Defining criteria and indicators for a sustainability label of local public services. *Ecological Indicators*, *57*, 452–464. https://doi.org/10.1016/j.ecolind.2015.05.016

Enticott, G., & Walker, R. M. (2008). Sustainability, Performance and Organizational Strategy: an Empirical Analysis of Public Organizations. *Business Strategy and the Environment*, *17*, 79–92.

EPA. (1997). *Volunteer Lake Monitoring* (Vol. 17). United States Environmental Protection Agency, Office of Water, Washington, DC.

EPA. (2000). *Volunteer Wetland Monitoring: An Introduction and Resource Guide*. United States Environmental Protection Agency, Office of Water, Office of Wetlands, Oceans & Watersheds, Washington, DC.

EPA. (2006). *Volunteer Estuary Monitoring: A Methods Manual*. The Ocean Conservancy, United States Environmental Protection Agency, Office of Wetlands, Oceans and

Watersheds, Washington, DC.

Freeman, E. R. (1984). *Strategic Management: A Stakeholder Approach*. Boston, MA: Pittman Books Limited.

Gadenne, D. L., Kennedy, J., & McKeiver, C. (2008). An Empirical Study of Environmental Awareness and Practices in SMEs. *Journal of Business Ethics*, *84*(1), 45–63. https://doi.org/10.1007/s10551-008-9672-9

Government of Canada. (2000). *Sustainable Development in Government Operations: A Coordinated Approach. Government of Canada*.

GRI. (2004). *Public Agency Sustainability Reporting and a GRI Resource Document in Support of the Public Agency Sector Supplement Project.* Global Reporting Initiative, Amsterdam: Netherlands.

GRI. (2005). *GRI Sector Supplement for Public Agencies Pilot Version 1.0*. Global Reporting Initiative, Amsterdam: Netherlands.

GRI. (2013). *Sustainability Topics for Sectors: What do stakeholders want to know?* Global Reporting Initiative, Amsterdam: Netherlands.

Ho, A., & Coates, P. (2001). Citizen-Initiated Performance Assessment - The Experience of Initiation in the State of Iowa, United States. In *Annual National Conference of the American Society for Public Administration*.

Holzer, M., & Kloby, K. (2005). Public performance measurement: An assessment of the state-of-the-art and models for citizen participation. *International Journal of Productivity and Performance Management*, *54*(7), 517–532.

Hörisch, J., Schaltegger, S., & Windolph, S. E. (2015). Linking sustainability-related stakeholder feedback to corporate sustainability performance: an empirical analysis of stakeholder dialogues. *International Journal of Business Environment*, *7*(2). https://doi.org/10.1504/IJBE.2015.069027

Hunsberger, C. a., Gibson, R. B., & Wismer, S. K. (2005). Citizen involvement in sustainability-centred environmental assessment follow-up. *Environmental Impact Assessment Review*, *25*, 609–627. https://doi.org/10.1016/j.eiar.2004.12.003

Institute for Local Government. (2013). *Sustainability Best Practices Framework*.

Jaeger, B. J. (2011). The Gap Between ESG Practice and Perception. *Sustainability & CSR*, 58–60.

Julnes, P. de L. (2011). Performance Measurement Beyond Instrumental Use. In W. Van Dooren & S. Van de Walle (Eds.), *Performance Information in The Public Sector: How it is used*. Palgrave Macmillan.

Le, X.-Q., Vu, V.-H., Hens, L., & Van Heur, B. (2014). Stakeholder perceptions and involvement in the implementation of EMS in ports in Vietnam and Cambodia. *Journal of Cleaner Production*, *64*, 173–193.

Lee, E. M., Park, S., & Lee, H. J. (2013). Employee perception of CSR activities: Its antecedents and consequences. *Journal of Business Research*, *66*(10), 1716–1724.

Lee, V. (1994). Volunteer Monitoring: A Brief History. *The National Newsletter of Volunteer Water Quality Monitoring*, *6*(1).

Liphadzi, S. M., & Vermaak, A. P. (2015). Assessment of employees' perceptions of approaches to sustainable water management by coal and iron ore mining companies.

Journal of Cleaner Production. https://doi.org/10.1016/j.jclepro.2015.01.037

Mascarenhas, A., Coelho, P., Subtil, E., & Ramos, T. B. (2010). The role of common local indicators in regional sustainability assessment. *Ecological Indicators*, *10*(3), 646–656. https://doi.org/10.1016/j.ecolind.2009.11.003

Mascarenhas, A., Nunes, L. M., & Ramos, T. B. (2014). Exploring the self-assessment of sustainability indicators by different stakeholders. *Ecological Indicators*, *39*, 75–83. https://doi.org/10.1016/j.ecolind.2013.12.001

Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts. *Academy of Management Review*, *22*(4), 853–886.

Moreno Pires, S., & Fidélis, T. (2012). A proposal to explore the role of sustainability indicators in local governance contexts: The case of Palmela, Portugal. *Ecological Indicators*, *23*, 608–615. https://doi.org/10.1016/j.ecolind.2012.05.003

MORI Social Research Institute. (2002). *Public Service Reform: Measuring & Understanding Customer Satisfaction*. London.

Morrone, M., & Hawley, M. (1998). Improving environmental indicators through involvement of experts, stakeholders, and the public. *Ohio Journal of Science*, *98*(3), 52–58.

Mzembe, A. N. (2016). Doing Stakeholder Engagement Their own Way: Experience from the Malawian Mining Industry. *Corporate Social Responsibility and Environmental Management*, *23*, 1–14. https://doi.org/10.1002/csr.1353

New Zeland Government. (2011). *A guide to using the Common Measurements Tool*.

Paillé, P., Boiral, O., & Chen, Y. (2013). Linking environmental management practices and organizational citizenship behaviour for the environment: a social exchange perspective. *The International Journal of Human Resource Management*, (April 2013), 37–41.

Parmar, B. L., Freeman, R. E., Harrison, S., Wicks, A. C., Purnell, L., & Colle, S. De. (2010). Stakeholder Theory: The State of the Art. *The Academy of Management Annals*, *4*(1), 403–445.

Petts, J., Herd, A., & O'heocha, M. (1998). Environmental Responsiveness , Individuals and Organizational Learning: SME Experience. *Journal of Environmental Planning and Management*, *41*(6), 711–730. https://doi.org/10.1080/09640569811380

Ramos, T. B. (2009). Development of regional sustainability indicators and the role of academia in this process: the Portuguese practice. *Journal of Cleaner Production*, *17*(12), 1101–1115. https://doi.org/10.1016/j.jclepro.2009.02.024

Ramos, T.B., Alves, I., Subtil, R., Melo, J.J. (2007). Environmental Performance Policy indicators for the Public sector: The case of the Defence sector. Journal of Environmental Management, 82, 410-432.

Ramos, T. B., & Caeiro, S. (2010). Meta-performance evaluation of sustainability indicators. *Ecological Indicators*, *10*(2), 157–166. https://doi.org/10.1016/j.ecolind.2009.04.008

Ramos, T. B., & Moreno Pires, S. (2013). Sustainability Assessment: The Role of Indicators. In *Sustainability Assessment Tools in Higher Education Institutions: Mapping Trends and Good Practices Around the World* (pp. 81–99).

Ramos, T. B. Martins, I. P., Martinho. A. P., Douglas, C. H., Painho, M., Caeiro, S. (2014).

An open participatory conceptual framework to support State of the Environment and Sustainability Reports. Journal of Cleaner Production, 64, 158 - 172.

Reed, M. S. (2008). Stakeholder participation for environmental management: A literature review. *Biological Conservation*, *141*(10), 2417–2431. https://doi.org/10.1016/j.biocon.2008.07.014

Rookes, P., & Willson, J. (2000). *Perception - Theory, development and organisation*. London: Routledge.

Saunders, M., Lewis, P., & Thornhil, A. (2012). *Research methods for business students* (6th ed.). Edinburgh: Pearson.

Sierra-García, L., Zorio-Grima, A., & García-Benau, M. A. (2015). Stakeholder Engagement, Corporate Social Responsibility and Integrated Reporting: An Exploratory Study. *Corporate Social Responsibility and Environmental Management*, *22*(5), 286–304. https://doi.org/10.1002/csr.1345

Silvertown, J. (2009). A new dawn for citizen science. *Trends in Ecology & Evolution*, *24*(9), 467–471.

Singh, R. K., Murty, H. R., Gupta, S. K., & Dikshit, a. K. (2009). An overview of sustainability assessment methodologies. *Ecological Indicators*, *9*(2), 189–212. https://doi.org/10.1016/j.ecolind.2008.05.011

Waligo, V. M., Clarke, J., & Hawkins, R. (2014). The "Leadership–Stakeholder Involvement Capacity" nexus in stakeholder management. *Journal of Business Research*, *67*(7), 1342–1352. https://doi.org/10.1016/j.jbusres.2013.08.019

Walker, H., & Brammer, S. (2012). The relationship between sustainable procurement and e-procurement in the public sector. *International Journal of Production Economics*, *140*(1), 256–268. https://doi.org/10.1016/j.ijpe.2012.01.008

Williams, B., Wilmshurst, T., & Clift, R. (2011). Sustainability reporting by local government in Australia: Current and future prospects. *Accounting Forum*, *35*(3), 176–186. https://doi.org/10.1016/j.accfor.2011.06.004

Yin, R. K. (2009). *Case Study Research: Design and Methods* (Fourth Edi). SAGE Publications, Inc.

Figures

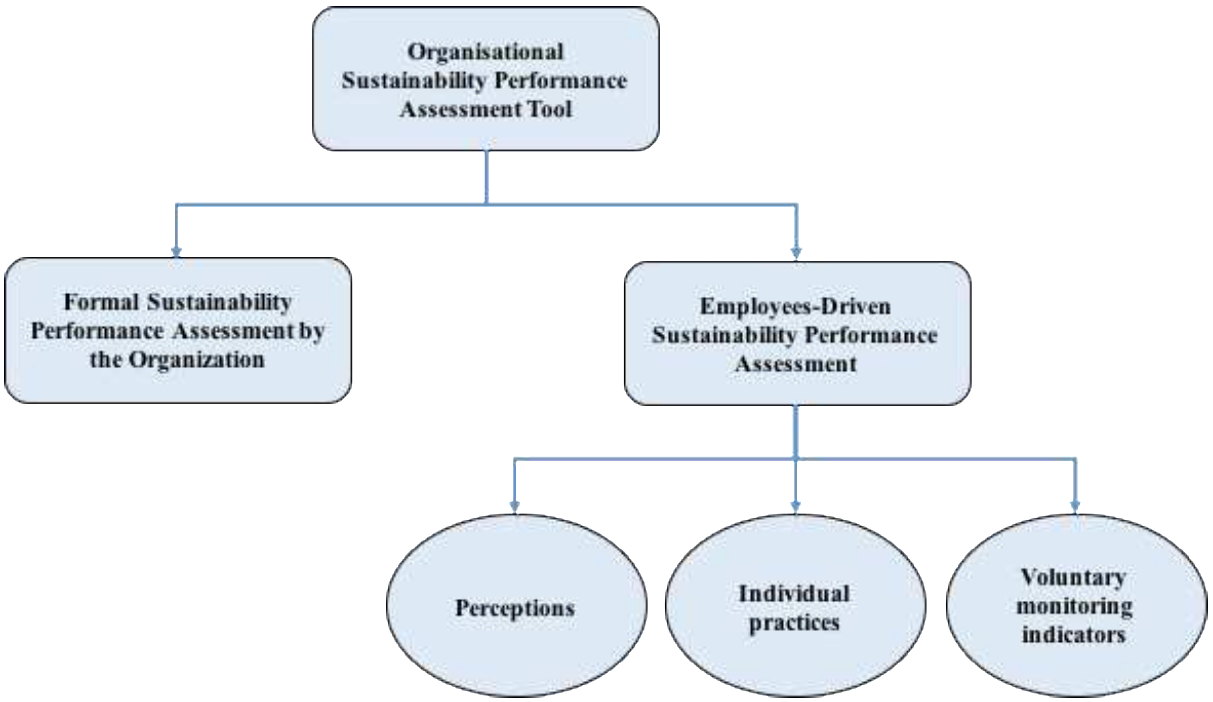
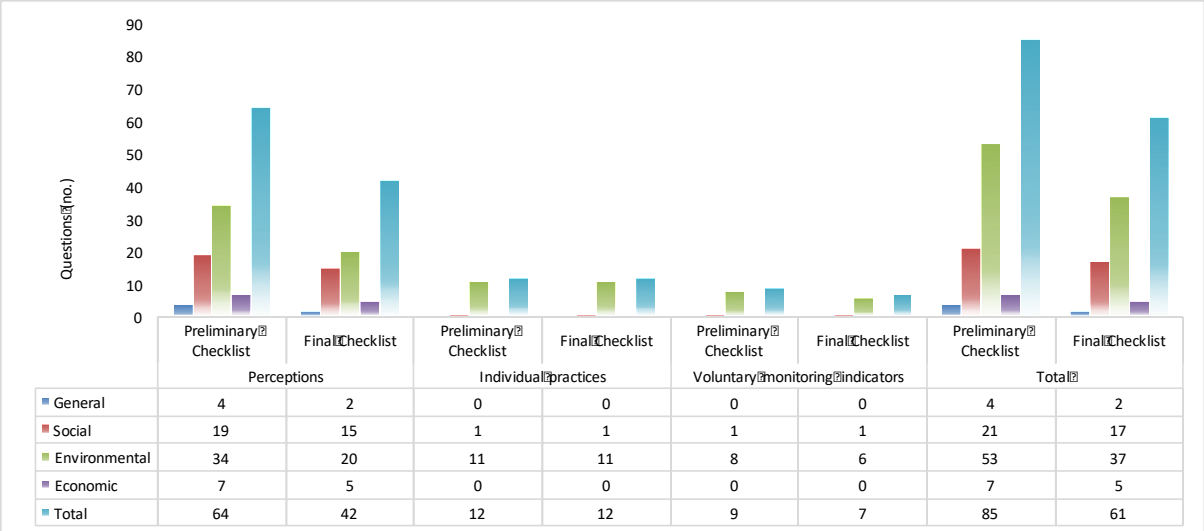


Figure 1 - Conceptual framework for stakeholders-driven sustainability performance assessment in public organisations.



	Perceptions		Individual practices		Voluntary monitoring indicators		Total	
	Preliminary Checklist	Final Checklist	Preliminary Checklist	Final Checklist	Preliminary Checklist	Final Checklist	Preliminary Checklist	Final Checklist
General	4	2	0	0	0	0	4	2
Social	19	15	1	1	1	1	21	17
Environmental	34	20	11	11	8	6	53	37
Economic	7	5	0	0	0	0	7	5
Total	64	42	12	12	9	7	85	61

Figure 1 – Stakeholders-driven sustainability performance assessment framework: preliminary and final checklist.

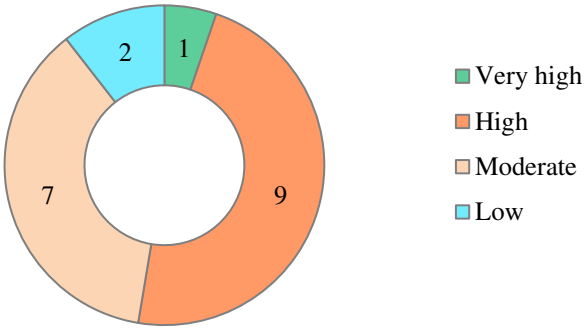


Figure 3 – Employees' opinion on the potential impact of the proposed framework in the organisational management and decision-making.

Appendix

Table A.1

Employees-driven sustainability performance assessment questions: checklist (P: Perceptions; IP: Individual practices; MVI: monitoring voluntary indicators) and scores average, standard-deviation and coefficient of variation, of the checklist evaluation criteria ("Understanding", "Usefulness" and "Reliability"); the questions in bold were included in the final list. Questions G3, S3 e S5 were reformulated/clarified in the final version, taking into account the workshop participant's feedback.

Questions (response options)	Category	Understanding			Usefulness			Reliability		
General		$\bar{X}$	S	CV (%)	$\bar{X}$	S	CV (%)	$\bar{X}$	S	CV (%)
G 1. Evaluate the effectiveness of communication to employees of the following support tools related to environmental management of the organisation: i) Environmental Politics or Environmental Strategy; ii) Environmental Management System, iii) Sustainability Performance Assessment System, iv) Sustainability Reports. (No opinion; Very Weak; Weak; Medium; Good; Very Good)	P	3.6	0.8	23.4	3.8	0,8	19,9	3,2	0,9	28,4
G 2. Evaluate the degree of engagement of employees in the conception, development and/or implementation of the following support tools related to environmental management: i) Environmental Politics or Environmental Strategy, ii) Environmental Management System, iii) Sustainability Performance Assessment System, iv) Sustainability Reports. (No opinion; Very Weak; Weak; Medium; Good; Very Good)	P	3,6	0,8	23,4	3,9	0,7	18,9	3,3	1,0	30,4
G 3. Evaluate the organisation's sustainability performance in terms of: i) economic sustainability; ii) environmental sustainability; iii) social sustainability.[i] (No opinion; Very Weak; Weak; Medium; Good; Very Good) *G 3. (Before re-form) Evaluate the organisational environmental and/or sustainable performance. (No opinion; Very Weak; Weak; Medium; Good; Very Good)*	**P**	4,2	0,7	16,6	4,4	0,7	15,7	3,5	0,5	14,5
G 4. Evaluate the degree of incentives in adopting more sustainable behaviours by the employees in the organisation. (No opinion; Very Weak; Weak; Medium; Good; Very Good)	**P**	4,1	0,8	20,9	4,4	0,6	13,7	3,7	0,6	15,0
Economic		$\bar{X}$	S	CV (%)	$\bar{X}$	S	CV (%)	$\bar{X}$	S	CV (%)
Expenses & Revenues										
EC 1. Evaluate the degree of transparency of the organisation on the management of public funds, such as expenditures and revenues. (No opinion; Very Weak; Weak; Medium; Good; Very Good)	**P**	4,3	0,7	15,5	4,7	0,6	12,4	3,5	0,8	21,9
EC 2. Evaluate the degree of efficiency for the accomplishment of expenses & revenues of the organisation. (No opinion; Very Weak; Weak; Medium; Good; Very Good)	**P**	4,1	1,0	23,9	4,4	1,0	21,9	3,5	1,0	29,4
Work productivity *Green accountability*										

EC 3. Evaluate the degree pf commitment of the organisation in carrying out investments that improve the environmental performance. (No opinion; Very Weak; Weak; Medium; Good; Very Good)	P	4,3	0,8	18,9	4,3	0,7	15,3	3,4	0,6	17,7
EC 4. Evaluate the impact of the results of productivity in: i) the organisation; ii) the employees.[1] (No opinion; Very Weak; Weak; Medium; Good; Very Good)	**P**	3,9	0,9	23,1	4,2	0,8	18,7	3,4	0,8	24,5
EC 5. Evaluate your motivation at work to do tasks. If "Very weak" or "Weak", please explain the reasons and suggest improvements. (Very Weak; Weak; Medium; Good; Very Good)	**P**	3,9	0,8	20,8	4,3	0,5	11,1	3,6	0,7	19,3
EC 6. Evaluate your performance against the goals and targets established. (Very Weak; Weak; Medium; Good; Very Good)	P	4,3	0,7	15,3	4,2	0,6	15,0	3,6	0,8	21,0
EC 7. Evaluate the challenge level of the individual goals and targets established by the organisation. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,0	0,7	16,7	4,3	0,6	13,2	3,7	0,7	18,2
Environmental		$\bar{X}$	**S**	**CV (%)**	$\bar{X}$	**S**	**CV (%)**	$\bar{X}$	**S**	**CV (%)**
Material consumption										
Taking into account the suitable execution of the activities related to the organisation, evaluate the following aspects:										
EN 1. The performance of the organisation on materials' consumption (paper/card, consumed electronics and toners and equipment). (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,1	0,7	17,4	4,1	0,9	21,3	3,4	1,0	28,4
EN 2. The usefulness of the existing practices to reduce material consumption (paper/card, electronic consumers, toners and equipment) (No opinion; Very Weak; Weak; Medium; Good; Very Good)	P	4,1	0,7	17,4	4,3	0,6	13,5	3,7	0,7	19,6
EN 3. Your behaviour in the adoption of practices to reduce consumption of materials (paper/card and toners). (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,4	0,7	15,7	4,4	0,9	20,5	3,7	0,9	25,0
Evaluate specific individual practices/behaviours:										
EN 4. Do you format your printer for double sided printing? (Not applicable; Very Weak; Weak; Medium; Good; Very Good)	**IP**	4,2	1,2	29,2	3,8	1,3	34,6	3,8	1,0	24,9
EN 5. Do you print in draft mode? (Not applicable; Very Weak; Weak; Medium; Good; Very Good)	**IP**	3,9	1,2	29,8	3,7	1,2	33,7	3,8	1,1	28,1
Electricity consumption										
Taking into account the suitable execution of the activities related to the organisation, evaluate the following aspects:										

EN 6. The performance of the organisation on the efficient use of energy. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,1	0,8	20,9	4,4	0,7	15,7	3,6	0,8	23,4
EN 7. The usefulness of the existing practices to improve energetic efficiency (No opinion; Very Weak; Weak; Medium; Good; Very Good)	P	4,0	0,7	16,7	4,3	0,6	13,2	3,6	0,7	19,3
EN 8. The use of natural lightning in the facilities. (Very Weak; Weak; Medium; Good; Very Good)	P	4,3	0,7	15,5	4,3	0,7	17,4	3,7	0,9	25,0
EN 9. The frequency that you see lighted places unnecessarily. Please identify those places. (Never; Rarely; Sometimes; Frequently; Always)	**MVI**	3,9	0,8	21,5	4,0	0,9	22,0	3,4	0,9	26,4
EN 10. The use of natural ventilation in the facilities. (Very Weak; Weak; Medium; Good; Very Good)	P	4,1	0,7	16,0	4,1	0,9	22,5	3,5	1,0	29,4
EN 11. The frequency that you see air-conditioned places unnecessarily. Please identify those places. (Never; Rarely; Sometimes; Frequently; Always)	**MVI**	3,7	1,0	27,2	3,8	0,9	22,6	3,4	1,0	30,0
EN 12. Your behaviour in the adoption of practices to increase energy efficiency. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,2	0,6	14,5	4,2	0,8	18,4	3,5	1,0	28,9
Evaluate specific individual practices/behaviours:										
EN 13. Do you turn off your computer when you leave your workplace for a long period of time? (Not applicable; Never; Rarely; Sometimes; Frequently; Always)	**IP**	4,4	0,8	17,4	4,2	0,8	18,7	3,9	0,8	21,5
EN 14. Does your computer have the power saving mode turned on? (Not applicable; Yes; No)	**IP**	4,3	1,0	23,3	4,1	1,0	25,5	3,7	1,1	30,1
EN 15. Evaluate the frequency that you choose to take the stairs over the elevator. (Not applicable; Never; Rarely; Sometimes; Frequently; Always)	**IP**	4,3	0,8	19,0	3,8	0,8	20,8	3,7	0,9	24,0
Water consumption										
Taking into account the suitable execution of the activities related to the organisation, evaluate the following aspects:										
EN 16. The performance of the organisation on water consumption. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,4	0,6	13,7	4,3	0,7	17,2	3,6	1,0	26,3
EN 17. The quality of the water that is consumed in the organisation. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,4	0,5	11,5	4,2	0,5	12,7	3,8	0,6	15,7
EN18. The usefulness of the existing practices to reduce water consumption. (No opinion; Very Weak; Weak; Medium; Good; Very Good)	P	4,4	0,5	11,5	4,2	0,5	12,7	3,7	0,7	18,2

EN 19. How often do you find water leakages or infiltrations in the building facilities? Identify where they happen (Never; Rarely; Sometimes; Frequently; Always)	**MVI**	4,1	0,9	22,8	4,1	1,0	24,2	3,6	1,0	26,3
EN20. The frequency that you identify water infiltrations in the building facilities? Identify where they happen (Never; Rarely; Sometimes; Frequently; Always)	MVI	4,0	1,1	26,4	3,8	1,1	28,6	3,5	1,1	30,9
EN 21. The frequency that you identify changes in the following water parameters: i) colour, ii) taste, iii) smell[1]. (Never; Rarely; Sometimes; Frequently; Always)	**P**	4,3	0,7	17,2	4,1	0,8	20,9	3,6	0,8	22,9
EN 22. Your behaviour in the adoption of practices to reduce water consumption. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,1	0,8	19,2	4,1	0,6	15,3	3,5	0,9	25,7
Evaluate specific individual practices/behaviours: **EN 23. Do you turn off the tap whilst you are washing your hands? (Never; Rarely; Sometimes; Frequently; Always)**	**IP**	4,4	0,8	19,0	4,0	0,9	23,6	3,6	1,0	28,4
Waste management										
Taking into account the suitable execution of the activities related to the organisation, evaluate the following aspects: **EN 24. The performance of the organisation in waste production (paper/ card, plastic/ metal or glass packages). (Very Weak; Weak; Medium; Good; Very Good)**	**P**	4,0	0,8	20,4	3,9	0,7	17,9	3,5	0,7	19,8
EN25. The usefulness of the existing practices to reduce solid waste production. (No opinion; Very Weak; Weak; Medium; Good; Very Good)	P	4,2	0,8	18,4	4,3	0,7	15,3	3,5	0,5	14,5
EN 26. Your behaviour in the adoption of practices to decrease waste production. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,0	0,7	18,6	3,9	0,7	17,9	3,3	0,7	20,0
Reuse, recycle and recovery of waste										
Taking into account the suitable execution of the activities related to the organisation, evaluate the following aspects: **EN 27. The performance of the organisation on reuse, recycle and waste recovery. (Very Weak; Weak; Medium; Good; Very Good)**	**P**	3,9	0,9	24,0	3,8	0,8	21,7	3,2	0,7	22,2
EN28. The usefulness of the existing practices to improve reuse, recycle and recovery of waste. (No opinion; Very Weak; Weak; Medium; Good; Very Good)	P	4,1	0,7	17,4	3,9	0,6	15,7	3,3	0,6	17,6
EN 29. The number of waste containers for the following types of waste: i) paper/ card, ii) plastic, iii) glass, iv) batteries v) toners[1]. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,3	0,7	17,2	4,2	0,6	14,5	3,6	1,0	28,4

EN 30. The locations of the following waste containers: i) paper/ card, ii) plastic, iii) glass, iv) batteries, v) toners[1]. If "Very Weak" or "Weak", please suggest new places to put them. (Very Weak; Weak; Medium; Good; Very Good)	**MVI**	4,1	0,7	16,0	3,9	0,7	18,9	3,4	1,0	28,4
EN 31. Your behaviour in the adoption of practices to reuse, recycle and waste recovery. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,1	0,7	18,0	4,1	0,8	19,2	3,5	0,7	20,1
Evaluate specific individual practices/behaviours:										
EN 32. How often do you reuse paper during your daily activities? (e.g.: one side printed paper). (Not applicable; Never; Rarely; Sometimes; Frequently; Always)	**IP**	4,5	0,5	11,5	4,2	0,6	15,0	3,4	0,8	22,5
EN 33. Do you frequently use the waste containers for the following recycling materials: i) paper/ card, ii) plastic, iii) glass, iv) stacks, v) toners[1]? (Not applicable; Never; Rarely; Sometimes; Frequently; Always)	**IP**	4,5	0,6	13,5	4,3	0,7	15,5	3,4	0,8	24,5
Greenhouse Gas Emissions										
EN 34. Evaluate the degree of accessibility of the facilities to collective public transportation. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,3	0,7	15,3	4,2	0,6	15,0	3,5	0,8	23,9
EN 35. Evaluate the degree of incentive given by the organisation to encourage employees to use public transports or alternative means of transport (e.g. Bike). (No opinion; Never; Rarely; Sometimes; Frequently; Always)	P	3,8	1,0	25,7	3,3	1,1	32,5	2,9	1,1	37,7
EN 36. Is carpooling (car sharing) frequently used between employees? (No opinion; Never; Rarely; Sometimes; Frequently; Always)	**IP**	4,2	0,8	19,1	3,4	1,1	31,8	3,2	0,9	29,2
Indoor air quality										
Taking into account the suitable execution of the activities related to the organisation, evaluate the following aspects:										
EN 37. The performance of the organisation on indoor air quality. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,1	0,6	15,3	3,8	0,9	22,6	3,4	0,6	17,7
EN 38. The usefulness of the existing practices to guarantee a good indoor air quality. (No opinion; Very Weak; Weak; Medium; Good; Very Good)	P	4,2	0,7	16,6	3,9	0,9	23,1	3,5	0,8	24,2
EN 39. The indoor air quality of the facilities. If there are places with "Very weak" or "Weak" indoor air quality (e.g. foul odor), please identify them. (Never; Rarely; Sometimes; Frequently; Always)	**MVI**	4,2	0,7	17,3	4,1	0,9	23,1	3,7	1,0	26,5
Indoor noise										
Taking into account the suitable execution of the activities related to the organisation, evaluate the following										

aspects:										
EN 40. The performance of the organisation on indoor noise. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,1	0,7	18,0	3,8	1,0	26,4	3,5	0,8	21,9
EN 41. The usefulness of the existing practices to control indoor noise levels. (No opinion; Very Weak; Weak; Medium; Good; Very Good)	P	4,2	0,7	16,6	3,9	1,0	25,5	3,5	0,8	21,9
EN 42. The frequency that you are disturbed with indoor noisy situations. (Never; Rarely; Sometimes; Frequently; Always)	P	4,3	0,7	15,5	3,9	1,0	24,6	3,5	0,8	24,2
EN 43. The quality of the windows' soundproofing. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,3	0,5	10,6	4,1	0,8	20,9	3,6	0,8	23,4
EN 44. Your behaviour in the adoption of practices to avoid / mitigate indoor noisy situations. (Very Weak; Weak; Medium; Good; Very Good)	P	3,9	0,8	21,5	3,9	0,8	20,8	3,1	0,7	23,1
Dematerialisation of public services										
Taking into account the suitable execution of the activities related to the organisation, evaluate the following aspects:										
EN 45. The performance of the organisation in dematerialising public services (e.g. payslip, internal and external communication). (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,3	0,7	17,4	4,4	0,5	11,5	4,1	0,6	13,8
EN 46. The usefulness of the existing practices to the dematerialisation of public services that are possible to be done in electronic format. (No opinion; Very Weak; Weak; Medium; Good; Very Good)	P	4,2	0,8	20,1	4,1	0,7	16,0	3,7	0,6	15,0
EN 47. Your behaviour in the adoption of practices to dematerialise public services. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,1	0,8	20,9	3,7	0,9	24,0	3,3	0,8	24,7
Evaluate specific individual practices/behaviours:										
EN 48. The frequency that you choose electronic format documents over print (Not applicable; Very Weak; Weak; Medium; Good; Very Good)	**IP**	4,3	0,6	13,5	4,2	0,6	15,0	3,5	0,5	14,5
EN 49. The frequency that you choose to communicate via electronic format over formal paper communications. (Not applicable; Very Weak; Weak; Medium; Good; Very Good)	**IP**	4,5	0,6	13,7	4,3	0,6	13,5	3,6	0,8	23,4
Green public procurement										
Taking into account the suitable execution of the activities related to the organisation, evaluate the following aspect:										
EN 50. The performance of the organisation towards green purchasing (e.g. recycled paper and recovered tonners). (Very Weak; Weak; Medium; Good; Very Good)	P	4,0	0,8	20,4	3,7	0,8	22,3	3,3	0,7	20,0
Facilities hygiene										
EN 51. Evaluate the performance of the organisation in pest control in the facilities. If "Very weak" or "Weak", please identify the places where occurs. (Very Weak; Weak; Medium;	**MVI**	4,3	0,6	13,2	3,9	0,7	17,9	3,5	0,7	19,8

Good; Very Good)										
EN 52. Evaluate the frequency of occurrence of pests in the organisation facilities. In case of occurrence (3,4 and 5) please identify where the happened. (Very Weak; Weak; Medium; Good; Very Good)	MVI	4,1	0,8	19,2	3,8	1,0	26,4	3,5	0,8	22,2
EN 53. Evaluate the degree of hygiene of the following facilities: i) offices, ii) common spaces, and iii) sanitary facilities[1]. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,2	0,6	15,0	4,3	0,7	15,3	3,7	0,7	17,5
Social		$\bar{X}$	**S**	**CV (%)**	$\bar{X}$	**S**	**CV (%)**	$\bar{X}$	**S**	**CV (%)**
Green jobs										
S 1. The organisation's activities justify hiring employees to develop work on environmental and sustainability field? (No opinion; Yes; No)	**P**	4,1	0,8	20,9	3,7	1,1	30,7	3,2	1,2	36,3
Employees training										
S 2. Evaluate the performance of the organisation in offering training to their employees. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,2	0,8	18,7	4,2	0,9	20,3	3,5	0,8	21,9
S 3. Evaluate the need to develop training for social responsibility, environmental management and green accounting. (Not applicable/No opinion; Very Weak; Weak; Medium; Good; Very Good) *S 3. (Before re-form) Evaluate the need to develop training on the following areas: i) social responsibility, ii) environmental management, and iii) green accounting[1]. (Not applicable/No opinion; Very Weak; Weak; Medium; Good; Very Good)*	**P**	4,2	0,8	18,4	4,0	0,7	16,7	3,4	0,7	20,2
Employees satisfaction with daily work										
S 4. Evaluate the degree of satisfaction of employees with their daily work. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,1	0,8	19,7	4,1	0,8	19,7	3,4	0,8	24,7
Employees satisfaction with the organisation										
S 5. Evaluate the degree of satisfaction of employees with their general working conditions. (Very Weak; Weak; Medium; Good; Very Good) *S 5. (Before re-form) Evaluate the degree of satisfaction of employees with their conditions according to the following aspects: i) equity, ii) security, iii) comfort and suitability of the facilities, iv) social justice, v) economic justice, vi) work-life balance, vii) work environment[1]. (Not applicable/No opinion; Very Weak; Weak; Medium; Good; Very Good)*	**P**	3,8	1,3	34,7	4,2	1,0	23,2	3,2	0,8	26,4
Health problems related to work tasks										
Taking into account the suitable execution of the activities related to the organisation, evaluate the following aspects:										
S 6. The performance of the organisation in promoting employees' health practices. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,3	0,6	13,2	4,4	1,0	21,9	3,4	0,9	26,4
S 7. Do health problems occur in employees that are directly related to work tasks? If "Yes", indicate the 3 most common health problems. (No opinion; Yes; No)	**P**	4,3	0,8	18,9	4,3	0,8	19,3	3,7	0,7	18,7
Corruption cases										
Taking into account the suitable execution of the activities related to the organisation, evaluate the following aspects:										

S 8. The performance of the organisation to prevent cases of corruption. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,5	0,6	13,7	4,7	0,5	9,6	3,4	1,0	28,4
Employees turnovers										
Taking into account the suitable execution of the activities related to the organisation, evaluate the following aspects:										
S 9. The performance of the organisation in the employee's turnover processes. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,2	0,8	20,1	4,1	0,9	22,8	3,6	0,8	21,0
S 10. The suitability of the number of employees comparing with the needs of the organisation. (No opinion; Very Weak; Weak; Medium; Good; Very Good)	**P**	4,4	0,5	11,5	4,4	0,7	15,7	3,4	0,7	20,2
Discrimination complaints										
Taking into account the suitable execution of the activities related to the organisation, evaluate the following aspects:										
S 11. The performance of the organisation in reducing the number of discriminatory order incidents. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,2	0,8	20,1	4,3	0,7	15,3	3,5	0,9	25,7
S 12. The frequency that you assist cases of discrimination: i) between employees, ii) between employees and external stakeholders (users, partners/collaborators, other institutions)[1]. (Never; Rarely; Sometimes; Frequently; Always)	**P**	4,1	0,9	21,3	4,1	0,7	18,0	3,5	0,7	20,1
Satisfaction of the users of the public organisation										
S 13. Evaluate the degree of satisfaction of users with the public organisation performance in providing public services. (No opinion, Very Weak; Weak; Medium; Good; Very Good)	P	4,2	0,8	18,4	4,3	0,6	13,2	3,5	0,7	19,8
Stakeholders engagement in management and decision processes										
Taking into account the suitable execution of the activities related to the organisation, evaluate the following aspects:										
S 14. Organisation's performance in the involvement of employees in management and decision-making processes. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,2	0,8	20,1	4,3	0,7	17,2	3,3	0,7	22,5
S 15. The procedures to collect employees' contributions to improve organisational performance. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,4	0,5	11,3	4,4	0,6	13,7	3,4	0,5	14,8
S 16. The performance of the organisation in providing information to the employees about the management procedures and organisation's decisions. (Very Weak; Weak; Medium; Good; Very Good)	P	4,3	0,6	13,2	4,4	0,6	13,7	3,5	0,6	17,6
Volunteer actions to support local communities										
Taking into account the suitable execution of the activities related to the organisation, evaluate the following aspects:										
S 17. The performance of the organisation in developing volunteer actions to support local communities. (Very Weak; Weak; Medium; Good; Very Good)	**P**	4,0	0,7	18,6	3,8	0,8	21,7	3,3	0,8	24,7
S 18. Your level of involvement in voluntary actions promoted by the organisation or employees' committee to support the local community (Very Weak; Weak; Medium; Good; Very Good)	**IP**	4,0	0,7	18,6	3,8	0,9	22,6	3,3	0,7	22,5
Fulfilment of compulsory and voluntary regulations and codes by the organisation										
S 19. Evaluate the performance of the organisation in complying with compulsory and voluntary regulations and codes, specifically related to: i) Environment, ii) Health and Safety, iii) Word	P	3,8	1,0	24,9	4,3	0,7	15,5	3,6	0,6	17,0

Code and iv) Quality. (No opinion; Very Weak; Weak; Medium; Good; Very Good)										
Availability of information to the users of the organisation										
S 20. Evaluate the quality of the information provided about the public service (e.g. clarity and facility in interpretation to all kind of users, included people with disabilities). (Very Weak; Weak; Medium; Good; Very Good)	P	4,3	0,6	13,5	4,4	0,7	15,7	3,5	0,8	23,9
Accessibility										
S 21. Evaluate the quality of the accessibilities to the facilities of the organisation suitable for people with disabilities. If "Very weak" or "Weak", please indicate possible improvements. (Very Weak; Weak; Medium; Good; Very Good)	**MVI**	4,4	0,5	11,5	4,5	0,5	11,3	3,7	0,7	17,5

[i]Each part should be answered separately.