Green human resource management and green environmental workplace behaviour in the eThekwini municipality of South Africa

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**Abstract**

Conversations on green human resource management (GHRM) are relatively new in the canon of human resource discourse. Existing studies have been focused on industrial and service industries of the private sector leaving a research gap in the public sector establishment, especially at the municipality level of governance. This study aims to address this gap by interrogating the perception and understanding of green behaviour and the evaluation of green behaviour performance. A total of 12 unit managers and employees of the human resource management department of the eThekwini municipality were purposively recruited based on existing knowledge of the green behaviour concept. The semi-structured interview approach was used in eliciting qualitative data. The NVivo (v.12) qualitative software was employed for the identification of themes and the content qualitative analytical tool was employed to make sense of the various themes. The findings show a range of perceptions and understanding of green behavior including change in management behaviour towards environmental sustainability goals, moving towards a paperless environment, re-engineering and automation of work process and safeguarding the environment through pro-environmental behaviours. The evaluation of employees’ green behaviour performance can be achieved through regular introspection and monitoring of the operations of green environmental activities, the integration of green behaviour targets with key performance indicators (KPI) and the benefits of green behaviour to the organisation. The study echoes the need for robust managerial support and massive organizational awareness of the importance of green behaviours for a sustainable work environment.

**Introduction**

South Africa is the second largest emitter of carbon-dioxide on the African continent due largely to the coal-dependent source of energy production and consumption (Department of Environmental Affairs and Tourism, 2019). The country can be described as the most carbon-intensive economy in the world (Warburton, Schulze & Jewitt, 2012). According to global estimations, about 387 million tons of carbon dioxide was released into the atmosphere representing 1.6% of global estimates in 2009 alone (Department of Environmental Affairs and Tourism, 2019). Globally, the waste sector contributes about 3% to the global greenhouse gas emission rate, leaving South Africa with an average of 2% contribution to the greenhouse gas emission rate (Department of Environmental Affairs and Tourism, 2019). The eThekwini municipality, one of the few municipalities in South Africa remain one of the highest emitters of green-house gas and waste in South Africa (eThekwini Municipality IDP, 2017). For instance, the municipality greenhouse gas emission recorded a total of 29 million in 2014 alone with an increase of 1% from the previous year (eThekwini Municipality IDP, 2017). This is sufficed it to argue that emissions calculations and future projections are gradually increasing among several organisations, although at different levels of increase (Bakas, et al., 2011; Friedrich & Trois, 2013). Therefore, the threat of environmental concern is no exception to the eThekwini Municipality. The study hopes to galvanize appropriate approaches for gauging and monitoring employees’ green behaviour activities for green environmental sustainability in the eThekwini municipality.
Existing policies and interventions have been commissioned to interrogate the challenge of environmental sustainability with practicable solutions (Diana, 2016). However, the missing link is the focus on the adoption of green behaviour initiatives for the actualisation of these solutions. To be sure, the HR department of any organisation is saddled with the responsibility to manage and instil a “green” organisational culture or behaviour on employees. Therefore, green organisation merges its organisational objectives with environmental sustainability principle which culminates into a ‘green work culture’ that applies GHRM practices to its operations (Dubihlela & Dubihlela, 2014). Globalisation and the yearnings for increase customer base and an ascending rise in markets across the globe has continued to swell the rate of environmental resource depletion and environmental degradation (Ehrnrooth & Björkman, 2012). This trend has provoked an increasing number of research interests on the management of environmental challenges (Opatha & Arulrajah, 2014; Unsworth, Dmitrieva & Adrisola, 2013).

In recent times, GHRM studies have continued to increase in tandem with the myriads of environmental challenges bedevilling organisations across the world including change in climate change, environmental degradation and pollution among others (Dumont, Shen & Deng, 2017). This argument still points to the recurring menace of environmental management and sustainability discourse. With the increasing knowledge of the growth of GHRM literature, there is still exist a research chasm with respect to GHRM studies in Africa (Emerson, et al., 2016). This analysis leaves a vacuum on how organisations and institutions in Africa can appropriate measures towards addressing work environmental challenges oozing from climate change and other environmental disruptions, especially among public organisations. The influence of globalisation on trade, economics and business has increased two-folds, especially with the increasing rate of natural resources among organisations which has continued to rouse concerns (Feinberg & Willer, 2013). Due to rapid changes in climate engendered by pollution, reduction of resources in the environment including deforestation, green-house gas emission, increase population and other environmental concerns has continued to provoke environmental sustainability threats to organisations (Fowler & Hope, 2007).

The array of these challenges have mount consistent pressures on business survival, as well as managers of industries on the need to adopt environmental friendly practices and appropriate green behaviour initiatives (Friedrich & Trois, 2016). Addressing these challenges have intensified the search for more proactive measures and strategies. For instance, some of these strategies are for business leaders to consider developing green product and servicing clients using environmental friendly practices. In other words, the adoption of environmental friendly initiatives can influence employees green behaviour in the organisations (Fu et al., 2013). Greening of employees’ behaviours requires appropriate intervention through the HR department since the HR plays critical role in the management of the workforce (Garavan et al., 2015).

The literature on GHRM and employee green behaviour is fast increasing, specifically since 2015 (González-Torre et al., 2010). What has remained unchanged in the canon of GHRM studies is the enormous focus on business-oriented organisations that emphasis profits over their environmental welfare and sustainability. For instance, GHRM studies including Saeed, Afsar and Afeez (2019) examined green psychological capital across different manufacturing sectors; Ojo, Ling and Alias’s (2020) study interrogated engaging information technology (IT) employees on pro-environmental behaviours across selected IT companies and Gilal et al., (2019) examined the role and influence of GHRM practices on employees in a higher educational institution. However, in the discourse of GHRM practices, sparse focus has been given to public organisations, especially at the municipality level of governance in South Africa. This argument forms the focus of this study. In part, this analysis tends to unpack the novelty of this study on GHRM practices and sustainable work environment. Basically, the aim of this study is to interrogate employees’ perception and understanding of green behaviour and highlight appropriate evaluation measures of employees green behaviour performance in the eThekwini Municipality of South Africa.

The chief contribution of this paper to knowledge is that existing studies on GHRM practices and green environmental workplace behaviour and sustainability are still largely sparse in the broader canon of HRM literature, with emphasis on municipality studies. By examining this discourse, it is likely to offer a fresh narrative of GHRM practices and green environmental workplace behaviour through the lens of the largely despised public sector organisation. This analysis is clearly important with the continuous climate and environmental changing order that has plummeted into myriads of environmental challenges for public organisations such as those providing service at the lowest level of governance. After the conceptualisation of GHRM, the paper turned to explain employees’ behaviour and green environmental workplace sustainability. In what follows was the explicit review of green behaviour and green environmental behaviour. The different methodological approaches were carefully reviewed and explained in the study. Particularly, the qualitative research and the semi-structure interview approach were used to gather data from selected units manager and employees’ from the human resource management of the eThekwini municipality, South Africa. The NVivo (v12) qualitative analytical software was employed to analyse the qualitative data with the emergence of different themes that speaks to the research problem.

**Literature Review**

**Theoretical and Conceptual Background**

**Green Human Resource Management**

The fundamental objective of any organisation is the maximization of profits with minimal lost. However, the changing global trends have provoked the need for a trajectory change with great concern on the environment. Organisations now understand the magnitude
of their responsibility to stakeholders including employees, community and other shareholders. With the recognition of these responsibilities, one of the crucial requirements for addressing these gaps is the strategic initiation of plans and policies for mitigating the effect of environmental challenges in communities for sustainable business. The task of maintaining environmental sustainability in any organisation is mostly directed by a committee or the human resource department. To be sure, the maintenance role of managing the environment by human resource is usually referred to as Green Human Resource Management (GHRM). The conceptual understanding of GHRM is described as the use of human resource management policies in supporting sustainable utilization of organisations resources and by extension the environment (Deswal, 2015). By implication, the conceptual clarification of GHRM is often referred to as organizational efforts of peoples’ management policies and practices towards the realisation of a safer work environment.

Mampara (2013) described GHRM as the practice and policies of human resource management (HRM) that seeks to encourage sustainable resource use in businesses and the promotion of environmentalism that could help in boosting the satisfaction and morale of employees within the organisation. In another sentiment, Zoogah (2011) emphasized GHRM as the philosophies and policies of HRM for the promotion of ecological usage of business resources and the prevention of any harmful environmental effect arising in an organisation. The core of GHRM is tied to environmental sustainability and the advancement of free environmental hazard organisation. The definition of GHRM informs that, GHRM is the application of environmental management principle to HRM processes towards making the world a safer place, especially with the mitigating effect of climate change and its consequence on HRM functions. Ideally, GHRM advocate a balance between the society, economy and the environment (González-Torre et al., 2010). Therefore, GHRM optimizes support for environmental sustainability as a new way of doing things across organisations including finance, environmental risk and essentially HRM functions.

By inference, GHRM assist in the appropriation of a culture of ‘green’ or ‘green organisation culture’ in the workplace. The place of organizational culture remains an important factor for the management of environmental sustainability (Berretels, Papania & Papania, 2015). It represents values, symbols and activities of the organisation and appreciates the management thought on environmental sustainability issues (Le Roux & Pretorius, 2016). Several commentaries have highlighted the role of GHRM in ensuring organisation sustainability on all fronts. For instance, Garavan et al., (2015) explains that GHRM practices are best employed in the implementation of a seamless environmental and organizational culture while acting as change agent. One of the fundamental role of the HR is the task of designing sustainable HR strategy where employees are taught different skills and ways of achieving the triple bottom line. The triple bottom line ensures the growth and sustainability of the organisations in the interest of all stakeholders (Govindan, Khodaverdi & Jafarian, 2013). This apparently, justifies the importance of GHRM towards ensuring environmental sustainability of an organisation. Public organisations, like the eThekwini municipality under study plays an important role in servicing their community and ensuring environmentally friendly and safer communities. This service can also include the integration of environmental sustainability into their operations and functions with emphasis on the implementation of GHRM policies and action plan and by extension, the incorporation of a ‘green’ strategy into their service objectives.

**Empirical Review**

**Employees Behaviour and Green Environmental Workplace Sustainability**

Employee behaviour can be explained as the reaction of employees to specific issues or situations in the work environment (Gregory-Smith et al., 2015). Studies have shown that while there is a plethora of issues that determines an employee behaviour, the provocation of employee behaviour is often dependent on the influence of existing internal or external organizational culture (Deswal, 2015; Graves, Sarkis & Zhu, 2013). Employee behaviour can also be conceived as the overall organizational behaviour. This is sufficed to argue that organizational behaviour encapsulates the study of how employees interact and behave in the world of work (Grolloe, Mzoughi & Pekovic, 2012). The management literature has shown an array of factors that affects employee’s behaviour including leadership, corporate work culture, personal life, issues around employee’s belief systems and responsibilities among other factors (Gully, 2013). Among other things, the HR function to regulate employees work behaviour in the organisation (Handgraaf et al., 2013). The discourse on employee behaviour as it affects green environmental sustainability is gradually shifting from the narration of “no-environmental consciousnesses to one of “higher consciousness of environmental degradation (Hahn & Figge, 2011). Research studies have continuously emphasized the extent of progress that are focused on employees’ behaviour towards ensuring a pro-environmental work-force and the realisation of green workplace environmental sustainability (Govindan, Khodaverdi & Jafarian, 2013; Berretels, Papania & Papania, 2015).

Pro-environmental behavioural researchers, particularly Hahn & Figge (2011) focused on using employees’ behaviour to upturn the organisation’s commitment to green environmental sustainability performance. Another important thesis was Wells, Manika and Graham (2015). The authors propagate an environmental behaviour framework that evaluates environmental behaviour in large organisations. Importantly, emphasis was on the modification of employee behaviour as critical to ensuring employees are pro-environmental in behaviours in the organisation (Wells, Manika & Graham, 2015). Osbaldiston and Schott (2012) did a meta-analysis on the different types of pro-environmental behaviour which can be categorized under four HR practices including recruitment, training, compensation and rewards and performance management. Environmental sustainability commitment, demonstration and goal-setting strategies, information on how to protect the environment, positive motivation for some exhibited
behaviours are some important tips to ensuring green employees’ behaviour compliant and green environment sustainability (Harmon, Fairfield & Wirtenberg, 2010). In other words, these types of intervention are regarded as employee’s green behaviour.

**Green Employees Behaviour and Green Environmental Behavior**

Achieving sustainable environment, behavioural change has to be eminent in which all members of the organisation are required to exhibit positive behaviour change towards green environment behaviour. These types of behaviours support the principle of safeguarding the environment (Jackson et al., 2011). Green employees’ behaviours is conceptualized by Ones and Dilchert (2012) as any measurable contributory behaviour that adds to the environmental goal of the organisation. This narration explains employee’s green behaviour as the mechanism that sustains the environmental reputation and culture of an organisation (Ji et al., 2012). The concept of green behaviour can be explained from two main points; the voluntary behaviour or required green behaviour (Jones, et al., 2012). For instance, voluntary green behaviour is behaviour that the individual employee willingly engaged in, that upholds the ethics of environmental sustainability (Opatha & Arulrajah, 2014). On the other hand, required behaviour are specific green behaviours that the individual employee engaged in that contributes to core environmental goal of the organisation and are measurable for task performance (Friedrich & Trois, 2016). The required green behaviour is more utilized by organisations that seek to increase their environmental participation or environmental capacity performance (Beretels, Papania & Papania, 2015). This is performed with the introduction of green job and tasks. The green behaviour is aligned with the job of the employee for optimum green environment behaviour compliant. For instance, these types of green behaviour include adherence to the organizational environment policies, the adoption of responsible alternative method of operations and production of sustainable alternative processes. Overall, compliant to these behaviour is expected to contribute to the bottom line of the organisation in terms of green environment behaviour in the long term.

Voluntary green behaviours are behaviours employees engaged in the interest of green environmental behaviour that exceed the organisations’s expectation and are not remunerated (Fu et al., 2013). These behaviours include the prioritization of environmental interest, going extra mile and ensuring compliant with green environmental behaviour, initiating programmes centered on environment, lobbying and activism and encouraging others towards becoming green environment behaviour compliant (Beretels, Papania & Papania, 2015). Opatha and Arulrajah (2014) summarized three dimensions to which employee can exhibit green behaviour in the organisation. The first is green organizational behaviour. This encapsulates the extent employee exhibit positive actions aimed at helping the firm achieve environmental sustainability goals. However, these positives behaviour are not categorized as required from the organisation, but voluntary actions from employees (Opatha & Arulrajah, 2014). The second dimension theorize employee green behaviour as ‘green organizational citizenship behaviour’. This explains the show of organizational empathy where employees decide to assist fellow employee perform positive green actions towards realizing green environmental behaviour (Opatha & Arulrajah, 2014). Again, this is not required by the organisation, but a voluntary effort geared for the realisation of green environmental behaviour. The range of behaviour and action practice include stimulating other employees to be green compliant, enquiring questions related to green issues and the transfer of green knowledge to others (Opatha & Arulrajah, 2014). The third dimension is called ‘green official behaviour’. This implies the extent of engagement of the employees as directed by the organisation in becoming green behaviour compliant for the sustainability of green environment behaviour (Opatha & Arulrajah, 2014).

In summary, employee’s green behaviour is no doubt wide ranging and cut across all behaviours that employees engage with in the workplace which directly or indirect affect the business environment. The behaviour could either be required by the management or a voluntary offer on the part of employees. It is the responsibility of the management through the HR to identify all these behaviours and integrate them with the organisation’s policies towards achieving sustainable environmental goals and objectives.

**Material and Methods**

**Research Philosophy**

The philosophical approach of this study is guided by the interpretivist research philosophy. This approach is employed to qualitatively understand how GHRM practices can be linked to provoke employees’ green environmental workplace behaviour. The interpretivist assumptions offer the opportunity to qualitatively explore, understand and interpret how GHRM can be used a road map for employees’ green environment compliant (Saunders, Lewis & Thornhill, 2009). It permits the assimilation of the human features into a study by focusing on meanings and how these meanings are interpreted in a research situation (Yin, 2016). The human elements of selected sample from the human resource management units of the eThekwini municipality were interrogated in order to infer meanings of the role of GHRM in ensuring a green environmental workplace through employees work behaviour.

**Research Design, Population and Sample Size**

The study is design based on the assumptions of the exploratory research design. This research approach is important as it aids in the exploration and expansion of the existing limited knowledge on GHRM and green environmental workplace behaviour (Creswell, 2012). For instance, the survey of existing literature reveals an existing gap on GHRM, especially within the confines of the municipality. The exploratory research design approach becomes important to appreciate this gap and further expand the research horizon through the prism of the municipality. The population are units’ managers and employees of the Human Resources Department of the eThekwini Municipality of South Africa. The human resource personnel of the municipality were chosen based
on their role in terms of the implementation of workplace policies and practices such as the GHRM practices and green environmental workplace behaviour. Their selection is justified as the managers of employees. A total of 12 sample size were recruited to participate in the interview from different sections of the Human Resource Management comprising of unit managers and employees. This sample size is appropriate to uncover deep research findings in a qualitative research (Shields & Rangarajan, 2013). The selection of these sample size does not consider any known criteria or skill, rather the mode of interactions between the respondents and interviewer assisted in comprehending their opinions, perceptions and experiences of the research problem (Sekaran & Bougie, 2016).

Recruitment, Research Instrument and Data Collection

The respondents were recruited based on purposive sampling. First, the recruitment process commenced with the initial identification of unit managers and employees in the Human Resource Department of the eThekwini municipality. Second, a referral approach was employed for the intentional recruitment of respondents who were described with a robust understanding of GHRM and employees’ green environmental workplace behaviour policies. The semi-structure interview type was used to elicit data. The justification is to give room for the revealing of complementary questions and to ensure clarity to all respondents in the events that there are observed ambiguities (Sekaran & Bougie, 2016). An interview guide was employed to guide the flow of questions and feedbacks (Kumar, 2012). There are few challenges peculiar with the interview method of data collection such as ambiguity in language, vagueness of responses to interview inquiry and the probability of misunderstanding questions and responses respectively (Saunders, Lewis & Thornhill, 2009). For this study, these challenges were addressed by ensuring the interview questions are worded in the English Language as understood by all respondents and the arrangement of the questions were pose to eliminate any barrier of misinterpretation.

The data gathering procedure follows and comply with all existing non-pharmaceutical intervention in the prevention of the spread of the COVID-19 pandemic. The entire interview lasted for a period of 3 months between December, 2019 and February, 2020. The interviews were recorded and other complementary notes were taken for ensuring clarity where vagueness are observed. The process of the interview started with a concise introduction of the researcher and the primary objective of the study. The general question was posed to understand green GHRM and employees’ green environmental workplace behaviour. Specific questions reflect on the perceptions and understanding of green behaviours in the workplace and the evaluation of green environmental workplace behaviour etc.

Data Quality and Analysis

To ensure quality and reliability of the data, the Trochim and Donnelly’s (2007) four approach of evaluating the reliability of the qualitative data was employed including credibility, transferability, dependability and confirmability of data. First, credibility of the data sets was ensured through a robust reflection of the opinions of all respondents in the analyses and results of the study. Second, the transferability of data was ascertained by ensuring the results are transferable to other research context. Third, dependability was pursued with compliant to all ethical rules. For instance, an ethical clearance was issued with protocol number HSSREC/00000377/2019 by the Humanities and Social Science Research Committee of the University of KwaZulu-Natal, South Africa certifying the study of ethical worthiness. In addition, a gate-keeper certificate was also issued from the eThekwini municipality. Lastly, the confirmability of data was ascertained by ensuring an interaction between the data and results of the findings. The Nvivo (v.12) qualitative software was employed to make sense of the transcript interview with the emergence of themes and sub-themes. The identified themes were later analysed with the content qualitative analytic tool. Overall, the data sets provoke important perspectives into understanding GHRM practices and green environmental workplace behaviour of employees. The various themes were analysed in sync with the verbatim responses of the respondents.

Analysis and Findings

Employees’ perception and understanding of green behaviour at the workplace

The concept of green behaviour encapsulates a pro-environmental behaviour with emphasis on the minimization of harmful behaviours to the environment through reduction and efficient use of energy consumption and reduction in waste. The composition of green behaviour in the context of HR practices captures employees tolerant towards the environment and the minimization of workplace practices and behaviours that are harmful to the environment. To appreciate employees’ green workplace behaviour, it is important to dissect their perception and understanding of green behaviour. A number of perception and understanding of employees green behaviour were shared by the majority of the respondents including the need for change management behaviour that could trigger environmental sustainability, moving towards paperless environment, the need for the re-engineering and automation of the workplace and safeguarding the workplace for sustainable environment respectively (Figure 1).
Figure 1: Employees perception and understanding of green behaviours

For instance, the call for change management behaviour in the context of attaining environmental sustainability has been argued as critical to employee green behaviour compliant. The majority of the respondents contend that green behaviour must be taught and employees must be supported and helped for a realistic work place environment devoid of harm. Similarly, the respondents also argued that understanding green behaviour in this epoch of consistent climate change and environmental disruptions calls for intensified effort through strategic management change in employees’ behaviour and the need to inculcate the right work ethics and values towards becoming green compliant. One of the respondents reported below:

My understanding of green behaviour has to do with welcoming change in the entire structure of the organisation in order to adopt this green behaviour. I mean it should be a strategic change management intervention that should impact in all areas of the organisation and not just about the issue of becoming paperless. This is how I understand the concept of green behaviour. It has to be a strategic response to sustainable development goal and response to the impact of climate change and global warming. So green behaviour can only be possible with major contributions evident from all areas of the organisation.

Other opinions and perceptions of green behaviour reflect the alignment of all necessary processes within the workplace for the integration of green work behaviour among employees. The majority of the respondents further argued that while the procedures and processes are often known, it is the responsibility of the HR department to synergies these procedures towards ensuring that employees are green behaviour complaints. Again, this position is a testament that the HRM remains a pivotal arm of organisational procedures and processes, especially in terms of the implementation of green behaviour initiatives through change management adaptation in the workplace. One of the respondents specifically explains:

I think it is necessary to understand green behaviour through the alignment of process and procedures with environmental sustainability. We have to bring in change management here as it remains fundamental in the implementation of any organisational policies. What I understand is that the appropriate change management procedure need to be align with whatever implementation the organisation is seeking to introduce such as the green behaviour initiatives and this has to happen through the workings and efforts of the HR department. I understand green behaviour as a process of ensuring employees are green induced. By green induced, I mean how they treat their environment by minimizing any harmful environmental impact on the organisation for sustainability and this can only happen when the right change is introduced.

The majority of the respondents also shared their understanding of green behaviour in the light of introducing change management in the way meetings are being conducted, especially with the introduction and global acceptance of different multi-media means of conducting meetings such as Zoom and Skype without being physically presence. This is argued to reduce emission during physical meetings and a means through which the organisation can be cost efficient. One of the respondents contend that the integration of green behaviour initiative has more to do with the implementation of appropriate change management process across the organisation.

I think I understand green behaviour from the perspective of reducing emission within the work environment and ensuring people are actually going green in the delivery of their jobs. One important understanding I have about the concept is the importance we need to give to emission reduction in the workplace and we can start this with the right change management principle. We can start going green in the real sense of it by adopting online meetings and avoid unnecessary gathering of employees for meetings. There are existing micro blogs such as Zoom and Skye that can be perfectly employed for this purpose. By way of doing this, I think my understanding of green behaviour will mean reducing human emission, minimizing energy use and reduction of waste for environmental sustainability.

The impact of climate change and global warmings on the environment has continued to ascend. The green behaviour initiative was further described by the majority of the respondents as the introduction of sustainable initiatives for a friendlier and safer work environment. The arguments reflect the need for the minimization of the effect of climate change on the work environment such as
the initiative to do away with paper and embrace the execution of work without the use of paper. One of the respondents’ recounts as follows:

My understanding of green behaviour is about sustainable initiatives. In other words, to do away with a lot of paper in the workplace as this is having a devastating effect on the earth and resulting into continued climate change. So I can say green behaviour involves the need for employees to start performing their jobs with less of paper and embrace recycling. It also involves the need to embrace online work execution as this makes work less cumbersome with health benefits.

Another respondent corroborated the above claims on the perception and understanding of employee green workplace behaviour as follows:

My understanding of green behaviour, particularly in the context of an organisation is the pursuit of a safer environment initiative by trying to do away with activities and things that can harm the environment; like throwing of papers around in the workplace…you know using and disposing papers without recycling is like killing more trees and this is not good for the environment. So I will say green behaviour is shifting away from papers we normally use in the offices to a more environmental friendly method of paperless that seek to protect our work environment.

Other understanding reflects the need to integrate automation and re-engineering into the process as a way of evolving the workplace into a green environment. For instance, the large portion of the opinions shared by respondents explain green behaviour as a process of integrating automation and technology into the work environment in order to reduce the use of paper. This analysis explains the role of technology and the envisaged impact of the 4th Industrial Revolution (IR) where work process is expected to be demystified by technology for the interest of the environment such as green behaviour. One of the respondents gave the following feedback.

I conceive the whole ideal of green behaviour as an effort towards paperless work environment. This means a process of re-engineering the work process in order to bring about automation. It also has to do with the introduction and use of technology as its best. For instance, the whole concept of the introduction of the 4th IR has rightly given us an idea towards becoming green behaviour inclined.

Another respondent adds to the conception of green behaviour in the light of going paperless through automation and work re-engineering process as follows:

From my understanding, green behaviour is trying to be more environmental friendly. Trying to save the work environment by not using too much of paper through imbibing the culture of automation and trying to ensure all work process are done electronically so we can stop the paper-based type of work execution and its impact on work environment.

**Evaluating employees green work behaviour performance at the workplace**

The need for a robust assessment of employees’ green work behaviour performance cannot be over-stretched, especially in tandem with the organisations quest to understand the level of employees green behaviour adherence. This concern has raised important questions on the roles and responsibilities of the HR departments in the assessment of how employees are responsive and complying to green work behaviour. Anchored on the desire of every organisations to be green behaviour induced in its processes and work execution, appropriate performance key indicators (KPI) must be constituted in the organisation to check employees green behaviour attitude to work and work environment. The general sentiments shared by the majority of the respondents show some evaluation measures expected of the HR department for a thorough assessment and evaluation of employees’ responsive behaviour to green behaviour and environmental sustainability of the work place. For instance, some of the important evaluation tips shared among others include the need to have a regular introspection and monitoring of operations of the green environment activities and the need to integrate green behaviour targets and KPI (Figure 2).

Other issues of evaluation shared explains that the organisation have not heard appropriate key performance assessment (KPA) or KPI for the evaluation of green behaviour environmental sustainability and the need to effectively determine the benefit of the green work behaviour initiatives on the environmental sustainability of the organisation (Figure 2). In specific, regular introspection and monitoring efforts remains one of the fundamental approach for the evaluation of any policy in an organisation. These measures are often the responsibilities of the HR department who ensure compliant are achieved. The majority of the respondents explain the need and reasons for prompt and regular monitoring of the operations of green environment in order to move the organisation towards green behaviour inclined. One of the respondents explain more as follows:
I would think the best way to evaluate green behaviour is to ensure units’ managers are engaged with appropriate introspection of their operations and reports of people who are really complying with the green behaviour initiative or not. If it is observed that there is no compliant, then they can have their own initiatives on how to monitor the progress throughout the year using KPI. They can introduce a reduction in number of paper copies each units makes every year for instance, or only give out pay slips when the need arises, otherwise, people can be told to view their pay slips online. In that way, they should be an evaluation of such compliant and it should be recorded and can be rewarded just like how performance are rewarded.

Another respondent, a unit manager in the department of HR explains the importance of monitoring and evaluating employees green work behaviour and activities in the light of reward for performance for workplace environmental sustainability. For instance, insight was shared on the periodic assignment of employees to environmental specific task and reward are assigned for the completion of such behaviour. In this context, the argument is the need to evaluate and assess workers on the level of their contribution towards the attainment of green work behaviour and environmental sustainability. I will recommend we put that as part of our performance indicator, when they assess me, I must show them, I have contributed in my work environment. What have I done to reduce the use of paper, what have I done to create this awareness, what have I done personally…But maybe we could suggest maybe once a month, you could take the team out there to keep the environment clean. Previously, back then like the last person that leaves the office must ensure all the lights are switched off, but now we do not even do that anymore, perhaps if there are more awareness now, those behaviours would continue.

The majority of the respondents also recounts the significance of integrating KPI into the evaluation and monitoring process of employees green behaviour attitude in the workplace. It was unanimously agreed that KPI remain an important criterion to assess and evaluate employees on their compliant level to green behaviour disposition at the workplace for environmental sustainability. The argument therefore, is premised on the appropriateness of evaluating and measuring employees’ compliant to green behaviour in the workplace. According to the large number of the respondents, it is expected that the HR department will incorporate green behaviour compliant into its existing HR functions for its to strive effectively and achieve its purpose of environmental sustainability. These arguments corroborate many existing commentaries on the evaluation of green behaviour at the workplace. One of the senior managers reported below:

I think talking about evaluation and monitoring of green behaviour initiative, we really need to consider how any of these compliant will be measured. After all, if we have performance indicator when we do selection and recruitment and want to read performance at the workplace. So for me, I think the best thing to consider is ensure people are rewarded in tandem with their compliant to this green behaviour initiatives. Like you know, human beings are irrational. So to get the best out of them, they have to be put on some level of evaluation while some reward is attached. So I think it is important we take the route of rewarding how often people are complying with the green behaviour initiatives in the environment.

Other evaluation measures explained by the majority of the respondents include the need to include and bring every member of the organisation on board for effective outcome of the green behaviour initiatives and environmental sustainability at the long run. For instance, a number of the respondents averred that the HR department must ensure a collective awareness by bringing all employees
into the process in order to have a fruitful green behaviour initiative outcome in the interest of the organisation. One of the respondent reported below:

We should be able to create plans for everyone in the process of evaluating employees’ green behaviour performance in the organisation. One of the key to evaluating this should be KPA and KPI and we must start bringing that in and in each of this plan, we must ensure it is roll down to every single person. So there must be an evaluation of green behaviour that deals with this trend. Then, after this process of carrying everyone along, there must be a proof of evidence of the scores, and from this evidence we can reward individuals for their green behaviour performance.

Another respondent, a senior HR manager talks about the benefit of evaluating green behaviour performance of employees to the organisation.

I think evaluating employees green behaviour performance has the potential of bring some sort of business benefits to the organisation. I understand it can change the work process into an environmental-inclined one and it will at the end of the day save the organisational more money from having to cut cost of non-environmental friendly supplies like papers.

Discussion of Results

The GHRM and green environmental workplace behaviour analysis no doubt offers an interesting insight into the understanding of employee green behaviour for sustainable work environment amidst increase climate change, pollution and degradation of the work environment. Its importance explicitly offers HR managers and practitioners the opportunity to stem the tide of environmental degradation of work through active engagement of the workforce in green behaviour activities. From the study, major findings show a collection of employees’ perception and understanding of green behaviour in the organisation. These includes change in management behaviour tailored towards environmental sustainability, the pursuit of advancing towards a paperless environment, in order to reduce the environmental impact of paper, the need for re-engineering and automation of work processes and safeguarding the environment through pro-environmental behaviours. These findings portray a robust understanding of green behaviour initiative on the part of the HR managers. However, it is interesting to note that the knowledge of green behaviour on the part of managers and employees is still yet to provoke appropriate human resource policies and strategies required for mitigating the growing impact of environmental degradation on the world of work and the society at large. This challenge, however, can be linked to the public sector where little or no effort are being channelled to environmental challenge. The collection of these findings corroborate existing studies (Opatha & Arulrajah, 2014; Gregory-Smith et al., 2015; Berriels, Papania & Papania, 2015).

The findings also show that to get the best from employee in terms of compliant to green behaviour disposition, employees green behaviour performance must be evaluated through regular introspection and monitoring of the operations of green environmental activities, aligning green behaviour targets with key performance indicator (KPI) and the evaluation of green behaviour benefits to the organisation. These findings confirmed the roles and responsibilities of the HR department in ensuring appropriate strategic policies are stimulated for green behaviour actualisation in the workplace. Existing literature corroborates these results (Friedrich & Trois, 2016; Wells, Manika and Graham, 2015; Hahn & Figge, 2011). Overall, the study has been able to establish the importance of green behaviour in the actualisation of green work environment through the application of appropriate HR policies. With this in mind, it is important to stress that the public sector organisation can adequately address environmental sustainability challenges if the right mix of HR policies are applied in making employee become green behaviour compliant.

Conclusions

The focus of this study has been to interrogate the nexus between GHRM and green environmental work place behaviour in the eThekwini municipality of South Africa. The analysis of a public organisation offers rich empirical laboratory for testing the importance of green behaviour adaptation and implementation. Therefore, the expansion of the green behaviour beyond the narrative of private sector establishment offers a new research frontier in the canon of GHRM studies. The study concludes that while the understanding of green behaviour was evident among the sampled managers of the eThekwini municipality, it is important to translate this knowledge into a robust policy framework towards ensuring the entire organisational workforce are green behaviour compliant. The canon of GHRM studies must therefore evaluate employees green behaviour on important HR metrics for work environmental sustainability.

The study recommends appropriate managerial supports and massive organisational awareness of the importance of green behaviour for sustainable work environment. The limitation of the study can be looked at from studying a single municipality in the KwaZulu-Natal province of South Africa. Future studies can compare two or more municipalities to give a broader view of GHRM practices and green environment work place behaviour in the KwaZulu-Natal province of South Africa.

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