



Managing Change: Considerations for Effective Human Resource Interventions, the Case of CSIR-Forestry Research Institute of Ghana

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Authors' contributions

This work was carried out in collaboration between both authors. Author GCM designed the study, wrote the protocol, and wrote the first draft of the manuscript. Author JA managed the literature review and editing. Both authors read and approved the final manuscript.

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ABSTRACT

Aim: The study examined the potential roles of Human Resources (HR) in ensuring efficient change management in a Ghanaian research organization, the Council for Scientific and Industrial Research (CSIR). The study was premised on the assumption that employees, when well engaged through HR activities, can be better informed and understand the need for change during any change management process.

Methodology: The study tested the assumption using a quantitative research design of survey questionnaire among 64 employees and a review of institutional documents at the CSIR - Forestry Research Institute of Ghana (CSIR-FORIG). The responses were analysed using statistical means.

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Findings: The findings show that HR functions, such as; communication, training, and monitoring of performance that make the Human Resource Manager a change agent are challenged at the CSIR-FORIG, especially in the communication role. While the level of understanding of change appears not to depend on the category of employee, the expectations and commitment of employees seem to be associated with the category of employee. Four predictor variables of change management were found not to have been adequately met due to factors such as lack of feedback mechanism in the communication strategy limiting full understanding of the change process.

Conclusions: The study concludes that change management implementation at the CSIR-FORIG did not yield the needed outcome and this could partly be attributed to HR role which was not adequately incorporated in the implementation strategy. Therefore, policy and practice implications on any change management process need to recognize the role of HR and incorporate HR professionals in the change management strategy.

Keywords: Change management; human resource; research institution.

1. INTRODUCTION

Organisations, whether public, state, or private, need to undertake self-evaluation regularly in order to reform or modernise the way things are done in the light of rapidly advancing technology and innovation [1]. The consequences of these evaluations create the need for change which often span from hiring extra employees to merging departments, buying out rival businesses, or setting up new divisions and units [2].

Although dealing with change can be challenging, Managers have the responsibility of preparing their staff for changes in their organisations [3]. It could be argued that change can apply to both individuals and organisations - thus becoming imperative in human life and organisational growth and stability. Within organisations, change is repeatedly seen as the organisations' response to phenomena and processes in the environment [4] with the objective of moving from a status quo to another level deemed better than the original.

To some scholars, change is seen as an on-going process [5] and inevitable in organisations – but perhaps difficult in some instances to deal with [3]. Despite its relevance in organisational culture, change can cause stress and a lot of worries to both employees and Management -impeding job performance and productivity[3.5]. However, and interestingly, the worries and stresses that come with change do not prevent an organisation from availing itself for it.

Ironically, the need for change is often unpredictable, and tends to be reactive, discontinuous, and often implemented during the

periods that organisations are going through crisis [6]. In this regard, it is discreet for the organisation to put up measures to manage and/or adopt mechanisms to avoid the threats that may arise from change and consequently take advantage of opportunities that emerge from any change process. This requires a thorough approach to altering or improving an organisation's strategy, procedures, or technologies [7]. It is a procedure that directs empowering, educating, and assisting people to undertake changes in order to achieve organisational objectives [8] - referred to as change management [3].

Change Management (CM) thus attempts to present methods to bring about and control changes as well as aid people in responding favorably to change [3,9]. Employees can align existing organisational resources using the CM process. Additionally, it enables companies to evaluate the overall impact of a change process.

The need for organizational change has been considered very often in private and profit-making organisations. Operating within the status quo has become a norm and any attempt to effect change may lead to chaos. In Ghana for example, there has been several calls in recent times for changes to be made in some publicly funded institutions to enable them respond to global competitiveness and to stay relevant in the context of internationalization and clearly, the Council for Scientific and Industrial Research (CSIR) is one of those institutions [10].

1.1 A Worthy Call Underpinned by a Timely Response

At the national and global levels, there is a growing need for scientific information and

technology relating to sustainable management and utilisation of forest resources [11]. Due to this, FORIG had to reposition itself to be able to meet the changing needs of society. As a result of many years of perceived inactivity and low productivity, CSIR institutes in Ghana over the past two decades, have responded to calls for change and are rapidly undergoing major reforms at all functional areas, including corporate administrative structure, human resources, working environment, working procedures, and funding arrangements.

Indeed, the drive for change in CSIR has been well articulated in the CSIR strategic document [11]. This plan envisions the creation of synergies among all 13 research institutes under the CSIR with the resultant effect of increasing the contribution that the CSIR makes to national development. Yet, the implementation of these changes could not pass without obstacles and difficulties as reported in the government blueprint [11].

Perhaps, a much stronger demonstration of these obstacles - disturbing the levels of change to varying degrees is what [12] provides: administrative leadership, lack of consensus, workforce resistance, and participation. Furthermore, barriers of change have been cited to include a lack of employee morale, improper planning, lack of clear scope, lack of prioritization of problems, and knowledge allocation and communication [13].

Certainly, considering obstacles associated with any change process as opportunities for learning can help a company to avoid them before they become 'wicked' problems during implementation [14] – from where we argue as a pervasive need yet, difficult to achieve. Inherently, the CSIR is confronted with both structural and humanistic challenges that impede reforms in the organization and these challenges are discussed in the sections below.

1.2 A Frontline Unit Struggling with Change Process

During reforms in CSIR over the years, one functional area that can be said to be at the forefront of the change processes but facing challenges with implementation is the Human Resources (HR) Units. The HR professionals are to take the lead in implementing and guiding most of the necessary change processes and also oversee the change-management

processes - serving as champions for change [15].

Unfortunately, this function of HR is conspicuously missing in CSIR. This has resulted in a lack of commitment of HR staff to support change management processes, poor engagement of staff, and poor communication during any change process in the organisation similar to what other scholars have cited as barriers to change [13,16].

In addition to this humanistic challenge is yet another barrier - a structural defect that contributed to leadership and governance weaknesses. The structure of CSIR demonstrates a master - servant relationship based on scientific superiority which does not allow researchers to operate independently on their own. As a result, the researcher's freedom to conduct research whenever appropriate is sometimes restricted and inhibits individual initiative, thus depriving the young researcher of the stimulus to conduct independent research.

Even though regular supervision and support from supervisors help researchers perform well the literature has shown that the boss-subordinate connection based on hierarchy or the master-apprentice relationship based on scientific superiority is neither (viable models for research organisations [17,18].

Unfortunately, there is paucity of literature in this area limiting information on the HR role in change management processes especially the content of a developing county – thus, emphasising gaps in literature and the need for more empirical studies into this area. This paper, therefore, sets out to investigate the HR role in change management processes at the CSIR and to clearly understand the 'whats' and 'hows' to make the HR professional effective in the implementation of change management strategies.

1.3 Towards an Integrated Framework for Change Management

The reviews above show that change management challenges in the CSIR include leadership, communication, employee engagement and employee commitment. Considering the complexity in managing change at the CSIR, this paper argues for a more integrated approach to change management processes in the CSIR. Therefore, four predictor

variables were proposed to guide the study: effective communication; change leadership; employee engagement, and employee commitment.

One strategy for ensuring successful change management is to have a change model that prescribes stages needed for implementing change management [19]. The key predictors identified in these models include change leadership, communication, employee engagement and employee commitment [20]. On the part of communication, there is the need to put in place an effective communication model to get all employees to understand fully what the change is meant for so that staff would demonstrate readiness for the change [20] and can commit fully to the implementation [21].

The change management literature provides a positive role of transformational leadership in organizational change [22] and that commitment to change by employees usually reflects their level of attachment to the implementation of new work rules, policies, programs, budgets, technology, and so forth, all of which are dynamic consequences emanating from their understanding of what the change means to them [23].

The basic assumption underpinning these variables applied in this paper is that when they come into play the role of the HR would be clearly expressed in their functions thus empowering HR professionals to ensure effective change management.

This study attempted to find out how these variables relate to change management at CSIR-FORIG and their influence on the role of the HR unit.

1.4 Test of Hypothesis

Two hypotheses were set for this study:

1.4.1 The first hypothesis tested

H0: The null hypothesis tested in this study was: Not all categories of employees at CSIR-FORIG had full knowledge of the change process through change leadership engagement.

H1: The alternative hypothesis tested was: All categories of employees at CSIR-FORIG had full knowledge of the change process through change leadership engagement.

1.4.2 The second null hypotheses tested

H0: The null hypothesis was that not all employees were in support of the change and had major concerns.

H1: The alternative hypothesis was that all categories of employees were in support of the change with no major concerns.

2. METHODOLOGY

2.1 Study Design

We employed a quantitative research design in this study using survey questionnaires, and surveys. Our target population was Research Scientists, Technologists, Artisans, supporting staff, and ground staff of CSIR-FORIG with a total population of 177. We used a stratified random sampling technique to select participants for the study. This method of sampling was adopted to enable the researchers to split the population of interest into homogeneous-subgroups or strata-before choosing the research sample [24]. The stratum for this study was based on the job category. This particular stratum was adopted to ensure that the information gathered was not biased toward any particular group but a fair view of concerns of all categories. In each category, a representative sample size of 30% was randomly taken. In determining the sample size for a population less than 100, a sample of between 20% and 30% has been used in other studies to ensure generalisations [25]. This brought the total sample to 64. In this respect, the sub-sample from each category represents a quota of the total sample.

2.1.1 Recruitment of participants

Our criteria for recruiting participants for the study included; first, participants should have worked for a minimum of three years; second, participants should have interest in the study and finally, participants should agree to participate in the study by signing a consent form. The process of data collection was explained to the selected participants and all ambiguities were cleared.

2.2 Data Collection

Based on the change management predictors identified in the literature (Change leadership; Communication; Employee commitment and Employee engagement) and research questions posed, we designed a set of survey-structured

questionnaires using coded answers and administered them using Google forms and follow-up telephone calls and text messages. The questions were coded to indicate the degree of correctness or appropriateness of the statement. To ensure that the questionnaire administration run smoothly when rolled out, a test run was done on two selected respondents in each of the staff categories. The difficulties encountered were; the duration of delivery and clarity of some questions. These initial difficulties were rectified by simplifying and reducing the number of questions but taking due care to ensure the reliability and validity of responses.

2.3 Data Analysis

The coded responses were inputted into an SPSS spreadsheet to generate frequency tables and charts for further analysis using (Chi-square test) and interpretation. In SPSS spreadsheet, descriptive and inferential statistics were used to analyse the data. Using percentage and mean, we were able to determine how the variables were related. The responses from the questionnaires were summarized under specific research questions and a comparative narration done on the extent to which they correlated with the change predictors models and the real situation at CSIR-FORIG.

2.4 Validity and Reliability

We used semi-structured questionnaires to ensure validity of the study. These measurement

tools were designed to guarantee validity in the sense of ensuring integrity in the application methods and the precision of measurement. The tools were used consistently throughout the data collection process. The rigorousness in data collection and processing also safeguarded the integrity and quality of the results of the study. In terms of reliability, the application of rigorous analytical tools ensured the accuracy of findings that can be generalised to a broader population and findings that are near replication.

3. RESULTS AND ANALYSIS

3.1 Staff Commitment to Change

This section provides a response to the question “What are the areas of change that employees of CSIR will support the organization to institute”? In this respect the set of questions presented to the respondents was to find out if: the individual’s commitment to the change was based on a particular concern; the decision to remain at the organisation was based on a particular concern; the individual had concerns on the supply of resources and support of leadership to see the change through and; the individual had the belief that the change would benefit him and the organisation. The responses are summarized below in Charts (Figs. 1 and 2)



Fig. 1. Commitment to change

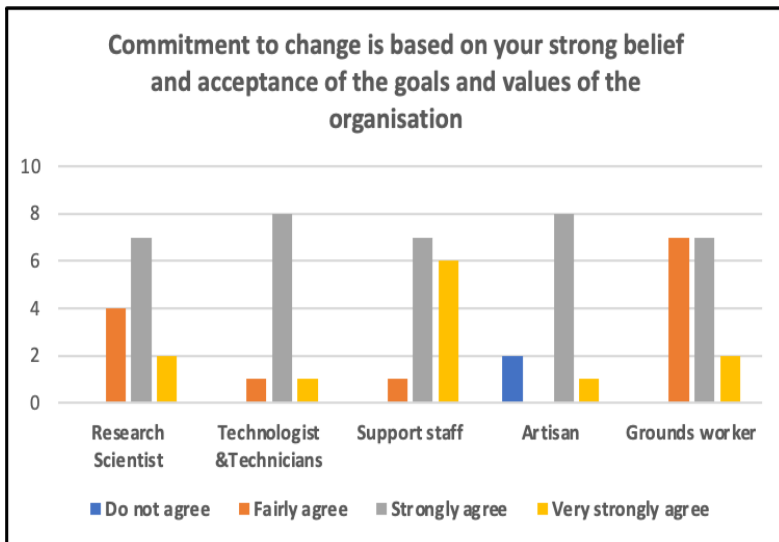


Fig. 2. Responses across employee categories

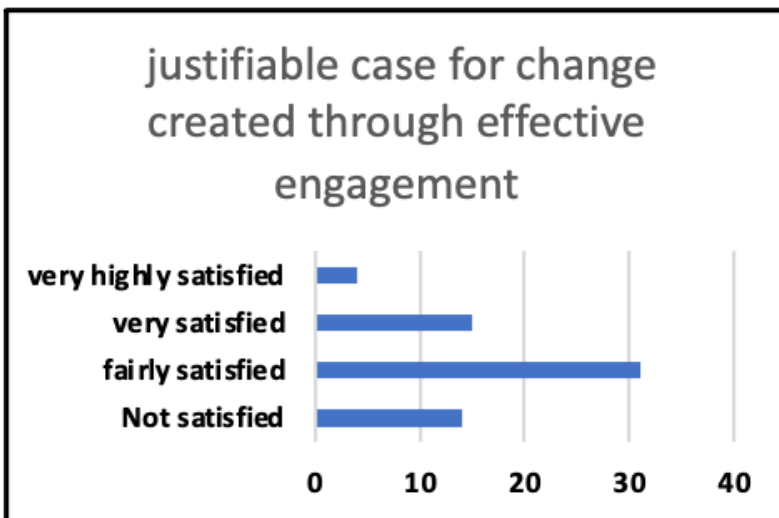


Fig. 3. Change through effective leadership

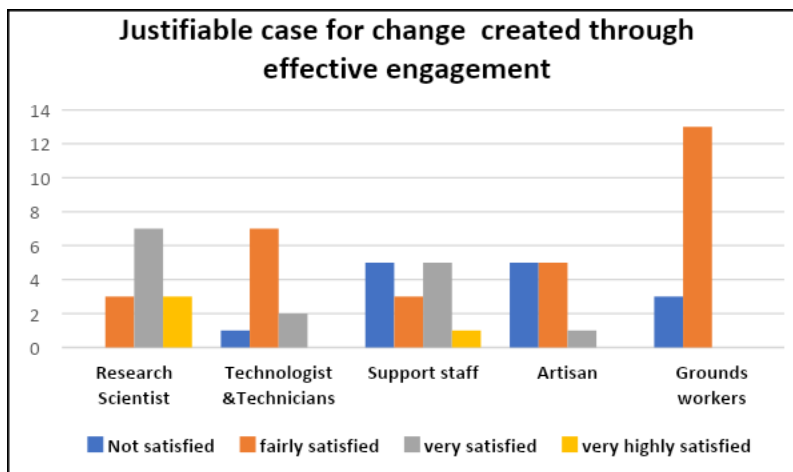


Fig. 4. Responses by staff category on change through effective engagement

3.1.1 Commitment to change is based on strong belief and acceptance of the goals and values of the organisation

In respect of the above question 62 (96%) agreed to the statement that commitment to change is based on strong belief and acceptance of the goals and values of the organisation. Only two respondents out of the total said they were not in agreement that commitment to change is based on strong belief and acceptance of goals and values of the organisation.

Fig. 1 Summary of total responses to commitment to change is based on the strong belief and acceptance of the goals and values of the organisation.

It was noted that across all staff categories, the majority of respondents in each category agreed with the statement. This may be an indication of the level of expectation among the staff on the outcomes of the change.

3.2 Leadership Created a Justifiable Case for Change through Effective Engagement

This paper argues that workers' acceptance of a proposed change hinges on their understanding of why the change is and what is in there for them. However, getting the understanding generally depends on effective engagement between leaders and employees during which time a justifiable case is made.

In this study, the respondents confirmed that there were engagements with leadership,

however, not all were satisfied that a justifiable case had been made. Those not satisfied (14) were in the minority (See Fig. 4).

However, while all the Research Scientists and most of the technologists appeared somehow satisfied, some of the supporting staff (5), Artisans (5) and ground workers (3) were not satisfied that a justifiable case had been made (Fig 4). The variation in response may be attributed to the individual levels of appreciation of the need for change. The level of appreciation appeared more positive in the Research Scientist and Technologist. It was also noted that some members of the supporting staff showed a high level of appreciation. These are likely to be the senior members and administrators who are involved directly in the change management.

3.2.1 Leadership created structures for change based on the depth of understanding of issues

To find out the level of awareness of employees on some of the tools employed by leadership they were asked to comment on whether structures created by leadership for the change process were based on the understanding of issues. The general response indicated that the creation of structures was based on the depth of understanding of issues as depicted in Fig. 5. However, the level of appreciation of the situation differed among the staff category as shown in Fig. 5. While the ground workers were at the lower level of appreciation the supporting staff appeared to be at all the levels of appreciation; an indication of the variety of roles they play.

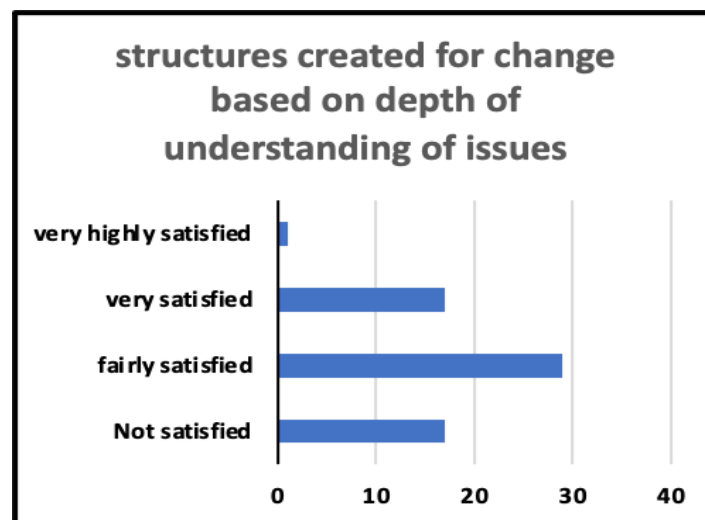


Fig. 5. Overall Responses on structures created for change based on the understanding of issues



Fig. 6. Overall responses by all respondents

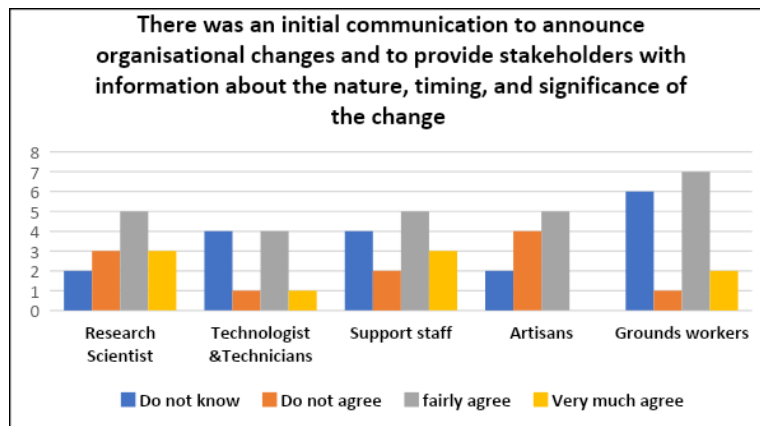


Fig. 7. Responses by staff categories to initial announcement of change structure

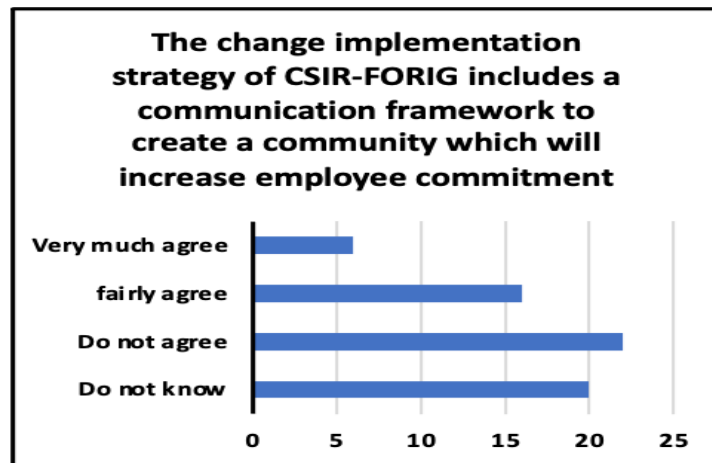


Fig. 8. Overall responses from all

3.3 Communication on Change

Fig. 6 indicated that there was an initial communication announcing the organisational

changes as reported by 34 (53.1%) respondents. However, 18 (28.1) respondents could not confirm. A few 12(18.8%) of the respondents did not agree that the action took place to provide

stakeholders with information about the nature, timing, and significance of the change.

However, about 28% did not know anything about that. The number of respondents who indicated no knowledge or did not agree with the statement was found in all the employee categories (Fig. 6). This development may be attributed to an ineffective communication system, or the limited tools of communication used. The other aspect of the communication system inquired was the existence of a communication framework that would help create a community that would increase employee commitment.

Respondents on whether the change implementation strategy of CSIR-FORIG includes a communication strategy.

As shown in Fig. 8 only 22 (34.4%) of the respondents indicated knowledge of or agreed that a communication framework existed to create a community that will increase employee commitment. On the other hand, a majority 42 (65.6%) of the respondents indicated that they did not agree or knew that a communication framework existed.

The results (Fig. 9) showed that the lack of knowledge about the existence of the

communication framework also extended through to all employee categories, demonstrating an ineffective communication system. The study also attempted to find out if the communication framework provided knowledge on the motives for change and if it helped to reduce the uncertainty of jobs. The responses were quite varied but followed the trends in the other two questions.

While 32 (50%) of respondents were in agreement with the statement, 21 (32.8%) were not in agreement and 11 (17.2%) did not know if the framework provided knowledge on the motives of the change (Fig. 10).

The lack of knowledge of the framework and disagreement with the impact of the communication framework permeates all staff categories. This raises again the question of the effectiveness of the communication system. The desk study showed that the main system of communicating to employees was the placement of information on the departmental wall notice boards. The other form is the intranet. The disadvantage of the notice board is that not all staff consult the notice board. The few that consult the notice board may not do that regularly.

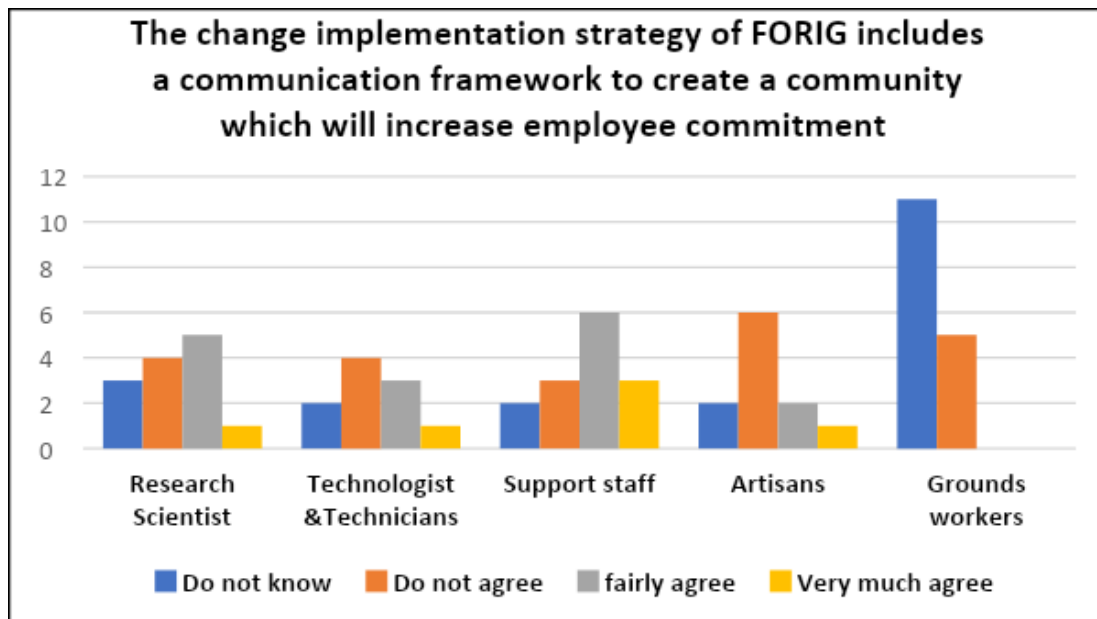


Fig. 9. Responses by different staff categories to Inclusion of communication framework in FORIG's strategy

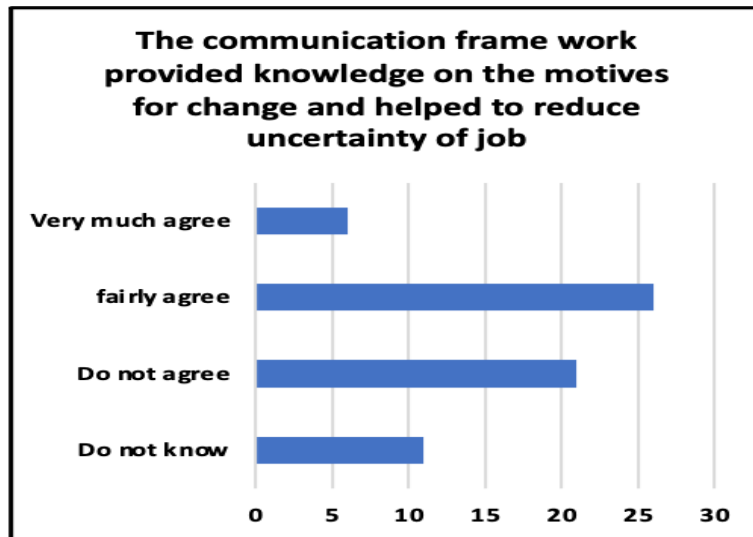


Fig. 10. Overall responses from all employee categories

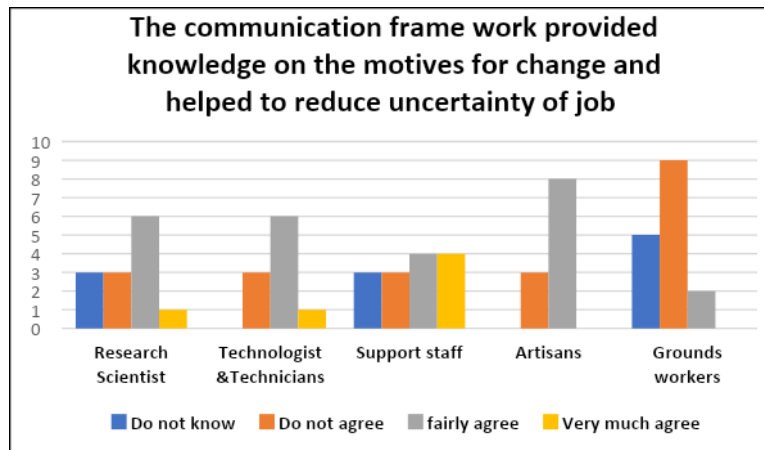


Fig. 11. Responses by different Staff categories to the knowledge of the change motives and job security

Table 1. Pearson Chi-square test for 4 potential responses by the five employee categories

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.422		
12	.667	12	.555
Linear-by-Linear Association	.645	1	.422
N of Valid Cases	64		

Table 2. Pearson Chi-square test for 4 potential responses by the five employee categories

Chi-Square Tests			
	Value	Dif	Asymp. Sig. (2-sided)
Pearson Chi-Square	29.416	12	.003
Likelihood Ratio	34.302	12	.001
Linear-by-Linear Association	6.282	1	.012
N of Valid Cases	64		

There are times when there may be too many notices on the board at the same time which makes sorting for current information strenuous. In that situation, there is a higher tendency for readers to miss out on some important notices. The intranet is readily available to few senior members who have personal computers in their offices. The artisans and ground workers hardly have access to the intranet. The other platform for getting information is the quarterly worker's durbar. Due to the limited time allotted to the durbar and numerous issues on the agenda some of the very technical issues may be left out for the departments to deal with which may never be done.

Hypotheses tested: The first null hypothesis tested in this study was that "Not all categories of employees at CSIR-FORIG had full knowledge of the change process through change leadership engagement. The alternative hypothesis for this was that "all employees had full knowledge of the change process at CSIR-FORIG. The results generally confirmed the Null hypothesis. For instance, in the responses to the question, if there was an initial communication to announce organizational changes and to provide stakeholders with information about the nature, timing, and significance of the change, the analysis showed that the positive and negative responses to the question were not dependent on the employee category as shown in Table 1.

This means that communication of information and knowledge was not effective across all categories of employees. The second null hypotheses tested was that "Not all categories of employees knew what the change meant for them and were not in support of the change with major concerns." The alternate hypothesis was that "all employees were in support of the change and had no concerns" The results as generally confirmed the alternative hypothesis. The responses to most of the questions were dependent on the category of staff. For instance, responses to the question "Your belief that the change will benefit both yourself and the organization is the reason why you are more supportive the change" appeared to depend on the category of employee as indicated by the output from the Pearson-Chi square test presented in Table 2. The Chi-square value (29.416) at 12 degrees of freedom (df) had a P value of 0.003 indicating high level of significance.

4. DISCUSSION

4.1 Existence of Systems for Effective Communication of Change at CSIR-FORIG

The basic reason why there must be effective communication on change management in an organization is to reduce change resistance from the employees due to lack of awareness or the appropriate information on the issue. The findings on communication indicated that across all the five staff categories some staff members appeared not well informed about the changes that were being implemented.

The existence of a communication system, though apparent, did not seem to be very effective or well applied as many workers claimed not to know much about the strategies for implementing the change. The main tools of communication that were listed were: noticeboards, posters, circular letters to heads of divisions, intranet mails, and announcements at workers' durbars. These tools do not appear to have been effective in communicating the change.

The informative function of communication influences readiness for change among employees and may also create a community that has trust in the organization and its management [20]. Communication, therefore, is key in effective change management and effective communication is important for both managerial and organizational success [20]. In this context, it must be understood that one of the main purposes of change communication is to inform the organizational members about the change, and how their work is likely to be altered because of the change. Thus, if the change in communication is not effective, Management could face some resistance during implementation.

4.2 Employees' Understanding of what the Change Means to Them

In this study we examined the employees' appreciation of what the change meant to them by asking them to react to issues such as: a justifiable case made for the change; effective structures created for change; adequate engagement built to solicit employee commitment; appropriateness of mission statement; leadership capabilities in effecting

change; implementation of rational strategies; employee empowerment to face the change and leadership ability to inspire employees. Except for the issue on the vision statement, all other issues listed here had a sizeable number of respondents showing a lack of knowledge or lack of understanding and dissatisfaction. This could be the impact of what is discussed above; that is, the communication was not effective enough to get all employees to understand fully what the change was meant for. Success of implementation would be adversely affected if communication is not effectively managed [22].

There is a positive role of transformational leadership in organizational change and that commitment to change by employees usually reflects their level of attachment to the implementation of new work rules, policies, programs, budgets, technology, and so forth, all of which are dynamic consequences emanating from their understanding of what the change means to them [22]. Thus, Managers who can get their subordinates to commit to new goals, programs, policies, and procedures may stand a better chance of having critical change activities successfully implemented. In the case of CSIR-FORIG change managers could not live up to this expectation.

4.3 Workers' Concerns and Perceptions about Anticipated Change in CSIR-FORIG

The level of concern shown by staff on the list of issues anticipated in change management at CSIR-FORIG seem to be dependent on the category of employees as shown in Section 4.4. This should be expected as the various employee categories have different skills, career development and progression plans and could be affected by the change differently. The findings indicated a serious level of doubt among some employees about the benefit that could accrue to the individual and the organization should an individual stay through the change. For instance, while 79% of support staff and 70% of Technologists indicated strong believe only 38% of Research scientists, 27% of artisans and less than 1% of ground workers expected benefits from the change. Despite the doubt of benefit flow there was the belief among 68% of all respondents that change leaders will provide the needed resources and other support to successfully execute the change and therefore worthwhile living through the change.

As reported in the literature, workers' commitment to change can be reflected in the belief they have in accepting the goals and values of the organisation and may be willing to put in extra effort on behalf of the organisation and therefore show the desire to remain in the organisation despite the challenges the individual may face during the change management [21,22]. For example, in this study, the Artisans (91%), supporting staff (86%) and Technologist indicated a strong commitment to remain and support the change because of their individual feeling of obligation to the organisation and saw it as the moral and right thing to do so. On the other hand, only 50% of the ground workers and 46% of Research Scientists expressed similar opinions. This may mean that Research Scientists and ground workers are more likely to change jobs if they find the change a bit problematic. It could also be the ease of getting alternative employment by these two categories of employees. Despite the doubt in benefit flow to the individuals, the findings have indicated that several positive outcomes can be attributed to the change management since the strategies became operational. These outcomes could change positively the perceptions of employees should another change policy be introduced.

4.4 Challenges Faced by HR Personnel in Change Management at CSIR-FORIG

In this study we sought to identify challenges based on research that could be described as contributory factors limiting successful implementation of change management by change managers including Human resource personnel. Some of the ways of understanding what is happening during the implementation of change management are to collect facts through research on the organisation and its sub-units (organisation evidence) and concerns of people and groups implementing or affected by the change (stakeholder evidence) [6]. The present study offered an opportunity to understand the progress made as well as the change-related benefits, fears, costs, and support.

In respect of the above the ensuing discussion is held both at the organization and stakeholder or employee category level. The findings indicated that following the implementation of the change strategies, research delivery improved and the public recognition for CSIR-FORIG also began to increase. These improvements were evident in the number of employees benefiting from all

levels of training; the number of collaborative working agreements; the increase in donor funding projects; the increase in research output and the improvement in worker behaviour.

To sustain performance, there will be the need for change leaders to adequately supply all the tools and equipment that will help in the execution of their duties. This requirement also translates into increased efforts in fund mobilization as already emphasized in the strategic plan where the institute aims at increasing its fund raising target to more than 30% of its annual running budget.

At the employee level, the findings showed that the change leadership should have strategies to respond favourably to workers' demand for higher remuneration packages following performance improvement. This may require management to explore several options for recognizing employees' efforts or motivating them to work harder. However, the other side of the coin will be how to leverage the higher remuneration package into increased revenue generation to sustain the financial equation.

One of the weak areas of the change process identified was the communication strategy which appeared not to have been effectively implemented judging from the high percentage of respondents who indicated not to have had adequate knowledge about the change. Since the change affects every employee, it stands to reason that nobody can be left out in the communication pathway.

Communication is most effective when it reaches intact groups and social networks notably at all-hands meetings and department gatherings rather than individuals as in the case of email [6]. They explain that communication is reinforced by actions that raise awareness of the change and even where employees experience the costs of change (e.g., high stress) or incur losses from it (e.g., job insecurity), effective communication promotes understanding of the reasons for change and more positive responses. This observation thus emphasizes the need to ensure effective communication of change as well as ensuring feedback for the review of processes. In all these phases of change implementation the role of HR is paramount.

The general roles of HR focus on employee management initiatives and organizational growth interventions to achieve the person-

organization fit. In this regard, the functions will include training and developing the employees on the whole so that they can evolve with the organization in times of change. Human resource (HR) practitioners should be seen as change agents, responsible for easing the impact of changes in their organization and protecting employees against the side effects of these inevitable changes [15]. For HR to be competent, knowledge and skills in several areas such as business knowledge, culture management, effective relationships, and human resource development skills are required. They note that HR practitioners who are unable to function as change agents will inevitably create a barrier against their becoming a well-integrated strategic partner.

5. CONCLUSIONS AND RECOMMENDATIONS

The conclusions are drawn from the outcomes of the research questions concerning the specific objectives. In respect of objective one which sought to find out the existence of systems for effective communication and understand how communication strategies of the change had been implemented, two main observations were made. First, there exist some structures for communicating all forms of information to the employee. Second, the existing structures for communication were not very effective in communicating the change management as it did not ensure equal reach to all categories of staff and did not allow feedback for the change leadership to assess how well the messages had been received and understood or appreciated.

The second objective of the study investigate employees' understanding of what the change meant to them if in indeed the change had been well communicated. It can be concluded that due of the limited effectiveness of the communication, not all employees could understand fully what the change was meant for and therefore will have a limited impact on building a community for successful change management. It can also be deduced that the limited understanding of what the change meant to the employee might have affected the level of achievement.

Analysing the findings under the workers' concerns and perceptions about anticipated change in CSIR it can be concluded that there is a high level of doubt among employees about the benefit that could accrue to the individual and the organisation should an individual stay through

the change. The level of scepticism was higher among employee category that have higher ease of moving out.

The role of the Human resource manager as an agent of change with the functions of communication, training and monitoring of performance can be said to be challenged at CSIR-FORIG. The four common predictor variables of change management (communication, change leadership roles, employee engagement and employee commitment) which all fall under the purview of HR were not adequately met in this case study as demonstrated by the communication gaps identified. The study covered only one out of the 13 institutes under the CSIR therefore limiting the extent to which the findings could be applied.

These recommendations are made based on the conclusions stated above.

1. Due to the critical importance for existence of effective communication systems in change management, the existing communication system must be revised to provide a strategy that encompasses the strategic elements of informing; removing uncertainty and job insecurity and; creating community of workers that will lead to commitment for accomplishing the change.
2. Continuous communication and training of employees on the change management should form a priority activity in HR responsibilities.
3. The HR unit can introduce effective communication systems such as memos, short reporting formats, one-page reports, feedback mechanisms, sharing information on notice boards to strengthen the current communication system in the organisation
4. The role of the HR should be expanded to include development and implementation of monitoring guidelines that will bring the necessary feedback to identify challenges and deviations in the change management implementation so that prompt remediation actions could be taken.
5. Since this study was conducted in only one of the 13 CSIR institutes, future studies in this area could be extended to more of the institutes to be able to generalize findings.

ETHICAL APPROVAL AND CONSENT

Ethical approval was sought from the management of CSIR-FORIG and all employees

who participated in the study consented by signing the consent form. At the beginning of the questionnaire a paragraph was devoted to explain to the respondents the main objective of the study. Respondents to questionnaire well assured of non-disclosure of their identity.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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