



Advances in Research
7(5): 1-15, 2016, Article no.AIR.27065
ISSN: 2348-0394, NLM ID: 101666096



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Appraising Management Perception of Health Safety & Environment Culture in a Nigerian Petroleum Company

C. Faisal Emetumah^{1*}

¹Imo State University, P.M.B. 2000, Owerri, Imo state, Nigeria.

Author's contribution

The sole author designed, analyzed and interpreted and prepared the manuscript.

Article Information

DOI: 10.9734/AIR/2016/27065

Editor(s):

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Complete Peer review History: <http://sciencedomain.org/review-history/15401>

Original Research Article

Received 17th May 2016
Accepted 8th July 2016
Published 14th July 2016

ABSTRACT

In order to effectively manage all pertinent production risks, the concept of Safety culture has evolved to include Health and environment facets in line with international best practices. Nonetheless the safety facet seems to be most considered in literature to the detriment of the environmental and health facets despite their relevance in sustainably managing production processes. The aim of the study is to assess managers' perception of Health, Safety & Environment (HSE) culture so as to understand the level of attention given to the individual facets. Relevant literature covering the aim of the study was reviewed; several safety culture models were also analyzed chronologically. The research design involved qualitative data gathering through semi structured interview questions for a sample of 21 management level employees who were purposively selected from a medium to large Nigerian petroleum company. Hudson's maturity model was used in determining the level for each HSE facet. Analyses of the study results show vital findings: management perceived HSE as either integrative or informative; security is an important part of HSE culture; performance tools identified were government supervision and self-audits. In conclusion, HSE culture was observed as a secondary objective; HSE culture was still

*Corresponding author: E-mail: fc.emetumah@imsu.edu.ng;

reactionary and pathological in maturity. The study recommends more employee involvement in HSE decision making, instituting a comprehensive HSE legislation and using technology in improving HSE performance.

Keywords: Health; environment; safety; culture.

1. INTRODUCTION

The concept of Health, safety and environment (HSE) has become an important part of petroleum organizations and multinational companies the world over [1]. The 1989 Exxon Valdez oil spill in Alaska [2], the 2010 British Petroleum's deep water horizon oil spill in the gulf of Mexico [3], point out the importance that must be placed on the perception of safety culture by personnel in the petroleum sector. These mishaps and accidents have a wide range of impacts; apart from the irrevocable damage to the corporate and social image of organizations involved, it could lead to reduction in their financial standing [4]. On that note, a positive safety culture can be defined as:

'a set of values, perceptions, attitudes and patterns of behavior with regards to safety showed by members of the organization, as well as set of policies, practices and procedures relating to the reduction of employees' exposure to occupational risks, implemented at every level of the organization, and reflecting a high level of concern and commitment to the prevention of accidents and illnesses' [5;628].

However, safety culture has broadened from the context of mishaps and calamities to include the environment and health issues. However, perception of HSE culture by personnel has not been very rigorous as it should be [6-8].

Nigeria is a West African federal republic strategically located with its southern coastal Niger-delta region opening into the gulf of Guinea, with vast petroleum and natural gas reserves [9]. As at December 2015, Nigeria (including offshore deep-water installations) had proven oil reserves of about 37 billion barrels and about 180 trillion cubic feet of natural gas; this indicates that Nigeria has the second largest crude oil reserves in Africa as well as the ninth largest natural gas reserves in the world [10]. In order to extract and export these natural resources, the Nigeria petroleum industry has to deal with external issues that shape its HSE culture; oil spill pollution that destroys flora,

fauna, contamination of rivers and streams, acid rain and health problems results in loss of livelihood for the poor masses who do not have much use for petroleum as they depend on the environment for food through farming and fishing [11-13].

In 2015 alone, about 20,000 barrels of oil were spilled into the Niger delta environment which will surely distort the natural ecosystem (see Fig. 1). Furthermore, over 1,000,000 barrels of oil have been spilled between 1979 and 2005 across several states in the Niger Delta region of Nigeria (see Table 1).

From the illustration in Fig. 2, the 'environment' facet involves efforts to prevent practices that cause pollution, efficient waste management to ensure that waste is reduced as far as reasonably practicable and efforts to protect environmental resources; flora, fauna etc. 'Safety' covers relevant as well as appropriate training and adequate protection for employees, visitors, facilities and equipment. Under the 'health' facet, employee health and wellbeing are fervently protected from working processes or by products as far as is reasonable possible. In addition, work environment is designed in such a way that adequate ergonomic features are considered, noise levels are maintained at acceptable levels and personal protection equipment are provided and used as required. On that note, the study aims at exploring the perception of HSE culture by management in a Nigerian petroleum company, in order to determine if any HSE facet receives more attention to the detriment of others. Specific objectives include: Evaluate how the relationship between health, environment and safety is perceived by management in the Nigerian petroleum company and identify tools used to measure HSE culture performance.

1.1 HSE Culture Models

Several models have been developed in order to provide more insight in understanding safety culture issues; most of these models are based on organizational culture studies. Westrum's [14] model on organizational culture identification

classified organizational culture into: pathological – organizations still playing the blame game about their cultural inconsistencies, bureaucratic – organizations who have realized that there are problems with their cultural identity but are still battling to make sense of it all and directive – organizations who have found a way of enhancing their culture towards achieving outlined goals. Fleming [15] proposed a maturity model for safety culture that can be categorized according to levels depending on efforts the organization has made towards improving safety culture: Level one (emerging), level two (managing), level three (involving), level four

(cooperating) and level five (continuous improvement). Filho et al. [16] tried to develop a model to measure safety culture maturity in Brazilian petrochemical companies based on the following dimensions: Information, Involvement, Organizational learning, Communication and Commitment. Hudson [17] describes a safety culture maturity model that follows the ideology of organizational culture model proposed by Westrum [14] which can be used to measure HSE culture in oil and gas companies. According to Hudson [17], HSE culture can be grouped into stages which describe the extent of safety maturity in the organization; Pathological:

Table 1. Oil spills in Niger Delta Nigeria (1979 – 2005)

Episode	Year	State	Quantity split (Barrels)
Forcados terminal oil spills	1979		570,000
Funiwa no. 5 well blow out	1980	Rivers	400,000
Yakama oil spill	1980	Rivers	10,000
System 2c Warri - Kaduna pipeline rupture at Abudu	1982	Edo	18,000
Sohika oil spill	1983	Rivers	10,000
Idoho oil spill	1983	Akwa Ibom	40,000
Jones creek oil spill	1998	Delta	21,000
Jesse oil spill	1998	Delta	10,000
Etiama oil spill	2000	Bayelsa	11,000
Ughelli oil spill	2005	Delta	10,000
Total			1,100,000

Source: UNDP [18]

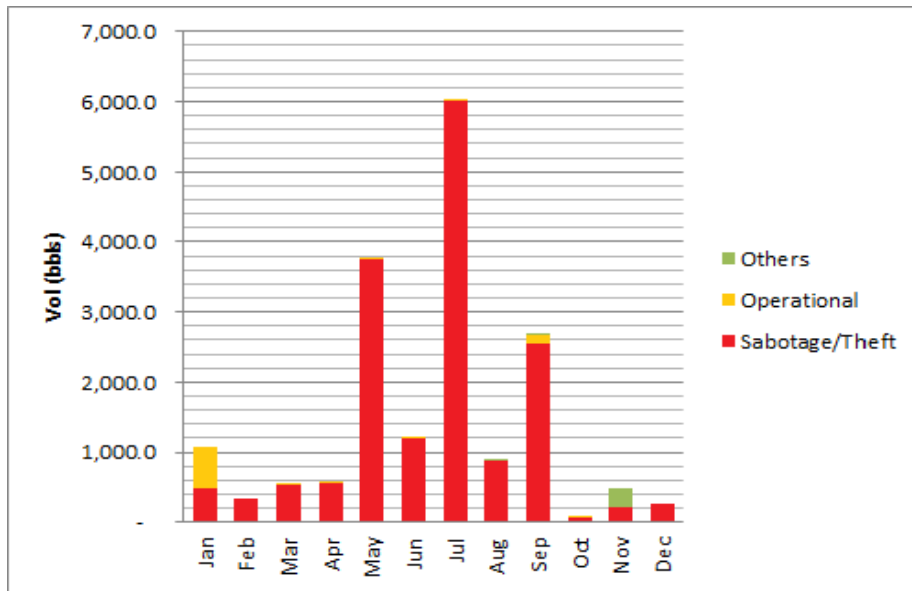


Fig. 1. Oil spills across Niger delta Nigeria in 2015

Source: Shell [19]

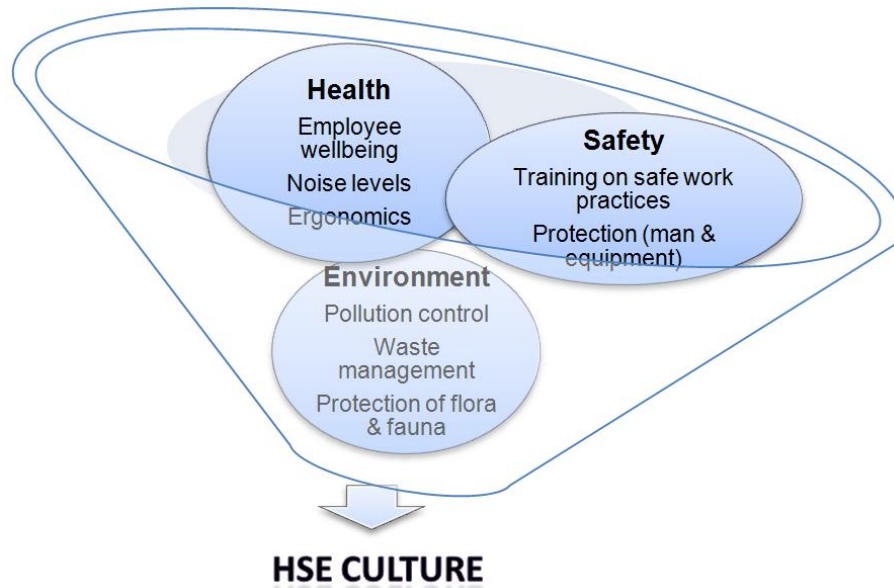


Fig. 2. Illustration of HSE culture facets

At this stage, safety culture is not given much concern except to ensure that industry and regulatory requirements are met; employee inefficiency is usually to blame for safety anomalies; Reactive: safety measures are introduced in reaction to accidents, mishaps, environmental degradation and employee health issues; management takes decisive action only to correct mistakes already made rather than prevent them; *Calculative*: safety management systems are in place at this stage but employees have not really gotten the drift and have to be reminded on what to do and when to do it; Proactive: the safety management system begins to improve and employees start to get involved in HSE culture development in the organization but there is still room for improvements to be made; and Generative: at this stage, HSE is considered in all ramifications of the organizational process and workplace procedures; employee participation is unprecedented and any form of safety anomaly no matter how insignificant, is taken very seriously by everyone.

1.2 HSE in Developing Countries

Though HSE management has become quite institutionalized in developed economies, developing countries are still struggling to meet up with the pace of progress. Meite et al. [20] carried out a survey on safety, health and environmental performance of small to medium scale companies in eight West African countries

including Nigeria. The study established that HSE culture principles are still rudimentary and quite poor in surveyed African countries (over 50% of companies surveyed performed below average). Similarly, Windapo & Jegede [21] carried out a study on HSE practices in the Nigerian construction sector and identified that only 25% of companies analyzed had high compliance rates. According to Adangor [22], the proposed petroleum industry bill (PIB) is expected to provide direction and stability in the petroleum industry but the inability of the Nigerian legislature to pass a revised version of bill into law portends danger to the petroleum sector in Nigeria; this makes implementation of international HSE best practices very difficult. However, some of the legal instruments and frameworks that affect HSE in the Nigerian petroleum sector include:

Petroleum Act (1969)

- Petroleum (Drilling and Production) Regulation 1969.
- Mineral safety regulations 1963.
- Harmful and Toxic Wastes Decree No. 42 (1988).
- Federal Environmental Protection Agency (Decree No. 58, 1988).
- Industrial Pollution Abatement Regulations (1991) Effluent Limitations Regulations (1991).

- Environmental Impact Assessment Act (1992).
- Environmental Guidelines and Standards for the Petroleum Industry (DPR), 1991, 1999.
- National Environmental Standards, Regulatory and Enforcement Agency 2007 Regulations.

2. METHODOLOGY

The case study in this paper is a Nigerian company whose area of operation covers refining, petrochemicals and exploration/production. The company has staff strength of a little over 500 employees. The corporation has a HSE department whose main responsibilities include occupational health, safety and environmental protection. The sample for the study was purposively drawn and consisted of 21 management level employees selected from the company's three main operation areas: refining, petrochemicals and exploration/production. The study was undertaken using the exploratory qualitative research method; Guldenmund [23] & Hoivik et al. [1] asserted that the phenomenological nature of organizational safety culture studies makes them quite difficult to quantify and are best researched through interviews or observations, which are qualitative methods. Semi-structured telephone interviews were used to collect empirical data required for the study. The interview questions (see Appendix 1) were structured in such a way that they cover all aspects of the study aim and objectives. The case study approach used provided the framework to enable description of study results. Though not as detailed as face-to-face interviews, telephone interviews provide a quick way of gathering data [24]. In addition, Nachmias & Nachmias [25] affirmed that telephone interviews undertaken with the same rules as face-to-face interviews are also valid. Purposive sampling was the technique used in determining the sample for the study: This is the sample deemed as the most dynamic and was selected for the study based on the reliability, size and significance of the case study used [26]. The research design had some limitation; interviewees restricted to managers in charge of HSE and all the respondents were Nigerians in a sector has a lot of expatriate employees whose perception are also important. The interviewees only agreed to participate in the study after they were assured of their anonymity and confidentiality. The telephone interviews each

took an average of 35 minutes and were conducted and transcribed for analysis over a period of two weeks and concluded by March 2014.

3. RESULTS AND DISCUSSION

3.1 Health

All of the managers interviewed defined 'health' in HSE as employee wellbeing and health. One of them included animal wellbeing as part of health in HSE. He stated: "Health implies the well-being of workers...the wellbeing of staff around and also if there are animals, they are included because the department uses the services of dogs that can detect gas leakages.....so health is basically the wellbeing of all living organisms within the organization". On how they deal with noise levels and adequate ergonomics in the organization, the managers mentioned maintaining noise levels at legal limits and not overworking employees as ways they deal with these issues. For instance a manager stated that because HSE deals with employee health and wellbeing, they try to ensure that employees are not over worked or exposed to noise levels above what the law stipulates (80 to 90 decibels). The interviewees understood 'health' in HSE as the same as occupational health and defined it as the level of physical and psychological wellbeing in the workplace. Because the interviewees stated that they dealt with control of noise and ergonomic issues to meet legal requirements suggests that HSE culture in Nigeria petroleum industry does not have much proactive measures to reduce these anomalies and only handle them in reaction to reports by employees on their health. This notion corresponds with the views of Coats et al. [27] on the reactive nature of some HSE cultures.

3.2 Safety

The response of the interviewees on the meaning of safety was quite homogenous. They described safety in terms of harm reduction, efficient work conditions, adequate preparation and security. They were of the opinion that suitable communication between HSE managers and staff, adequate safety policy and a government regulatory framework are components of an effective safety culture. Interviewees identified proactive measures, training, policies, industry standards, work procedures and training as features that help them to deal with accidents and mishaps in the

organization. Safety was the most talked about aspect of HSE culture and was also used interchangeably with security; this could be attributed to the deplorable security situation in Nigeria's Niger delta region [28]. This placing of more emphasis on safety by the interviewees suggests that the safety aspect HSE culture is given a lot of consideration in the Nigerian petroleum sector for the obvious reason of insecurity. Also, most interviewees understood safety as being prepared for accidents and that most accidents are as a result of employees not doing what they are told. This perception submits that safety culture is still quite rudimentary in the Nigeria since management lacks the will to fully implement adequate safety practices and is still playing the blame game. This suggestion is premised on the Fleming [15] and Hudson [17] safety maturity models.

3.3 Environment

The interviewees defined the 'environment' in HSE as the surroundings, water bodies, all living and non-living things in and around the workplace. They specified that the environment in HSE means the total surroundings including biotic and abiotic factors in the work environment. Managers identified research and development, sustainability, and legal frameworks (environmental laws) as components of effective environmental protection in HSE culture but did not imply which of them are currently being implemented. Six interviewees were of the opinion that assessments tools and training are the main issues to be considered on this subject. A theme that kept reoccurring under this subject and was mentioned by all interviewees is the issue of EIA which was mentioned by all the interviewees. One Manager defined an environmental impact assessment as an appraisal process carried out before commencing a developmental activity in order to identify possible impacts the said activity will have on the environment, so that adequate measures can be taken to ensure that the environment is protected. The managers indicated that they deal with issues like pollution control and waste management through competent and expert personnel, environmental conservation, management systems and performance tools. Many managers mentioned that they monitor their activities that pollute the environment and try to promote conservation. The results show that interviewees have a clear understanding of what the environment is since they were able to define it as the entire biotic and

abiotic things in their immediate surrounding which can be impacted by their activities in extracting, processing and distributing petroleum resources. But the interviewees kept mentioning EIA as a kind of pass mark were not able to clearly describe how. This attitude clearly agrees with Nwokeji [29] on misplaced attitudes and bureaucracy on getting things done.

3.4 HSE Culture Performance Measuring Tools

Interviewees defined HSE performance tools as measurement and monitoring tools that help to check the accomplishment of HSE objectives. All the managers interviewed stated that they have two kinds of performance tools (see Fig. 3):

- internal audits to appraise HSE performance.
- Government over sight function (supervision).

According to the interviewees, regular self-audits are internal exercises conducted from time to time by the HSE department to check HSE performance in various areas of production. The audits determine the level of HSE performance so that anomalies can be identified and ameliorated. The interviewees stated that government over sight involves monitoring activities by government agencies (ministries) and departments that visit the organization to ensure that stipulated rules and regulations are observed by the organization. They agreed that there is no singular body in charge of health and safety issues in Nigeria and that government supervision is carried by different teams from the different government ministries in Nigeria who are empowered monitor activities to ensure that they are in line with their areas of interest. Interviewees perceiving audits as internal checks and inspections for HSE assessment suggest that they are important HSE culture improvement techniques. This corresponds with Health & Safety Executive's five steps to risk assessment [30].

Government agencies they identified to have oversight function in HSE management in the sector include: Federal Ministries of Petroleum, Health and Environment. Many interviewees agreed that technology is quite helpful in improving HSE performance. One of them pointed out: "we are currently engaging expatriate consultants from the UK to come and train us on the use software in hazard

identification and analysis". Interview results show that interviewees perceived HSE performance tools as 'management mechanisms' that enable them to actualize the objectives of HSE (see Fig. 3). Government supervision being considered as a performance tool suggests that interviewees consider HSE a secondary issue and try to improve HSE culture only by meeting stipulated legal requirements. This perception agrees with Duijm et al. [31] on some companies implementing HSE issues only when government forces them to do so.

3.5 Relationship between Health, Environment and Safety

The described data suggests that management in the Nigeria petroleum industry understood HSE culture in two ways: Integrative and Informative (see Fig. 4).

Integrative: More interviewees viewed HSE culture in an integrative way. Most of the interviewees were of the opinion that HSE culture in organizations is used to combine health, safety

and environment concerns so that they can be easily used to protect employees and the environment. Therefore HSE culture was seen as something that can be effective if viewed from a holistic point of view (see Fig. 3). Proponents of this integrative view suggest that combining health, safety and environment into one term provides an easier way to ensure that employee health and safety as well as environmental protection are adequately considered. This seems to tally with the postulations of Martin [32] and Richter & Koch [33].

Informative: Other interviewees viewed HSE culture in an informative way. From Fig. 3, we can see that some interviewees stated that HSE culture is a process of providing knowledge or understanding that will result in fostering HSE culture. This view suggests that HSE was perceived as a way of providing more information and training that can result in better handling of environment, safety and health of employees. This perception of HSE culture agrees with Guldenmund [7] and Filho et al. [16].



Fig. 3. Identified HSE culture performance tools in the case study

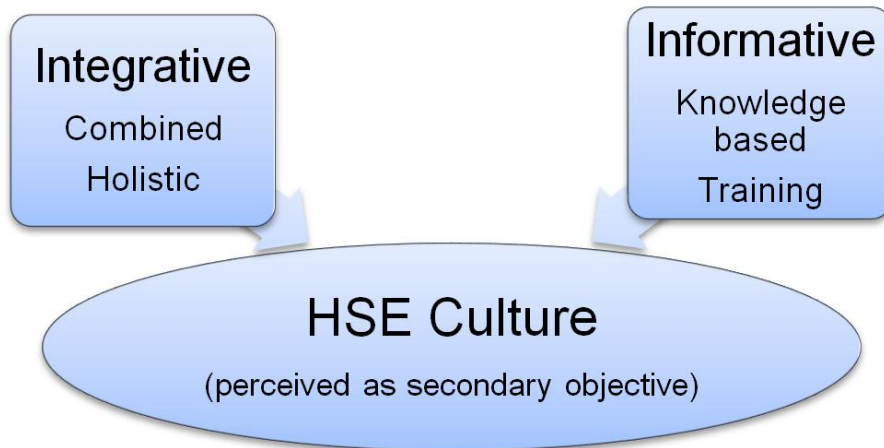


Fig. 4. Understanding of HSE relationship in the case study

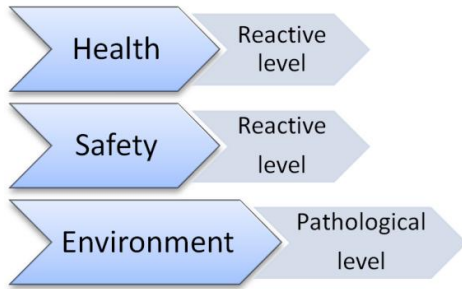


Fig. 5. Maturity level for individual HSE facets

4. CONCLUSIONS

The study shows that the relationship between the different aspects of HSE culture is quite complex in the Nigeria petroleum industry. However, the main conclusions to be drawn are that managers do not have a single view but different perceptions of HSE culture; HSE is a secondary objective since most managers perceive an imbalance in meeting both HSE and organizational goals. Based on Hudson's maturity model, Health means occupational health and is at the *reactive* level; Safety is the most emphasized aspect of HSE culture and its maturity is also at the *reactive* level. The treatment of the environment is rudimentary hence its maturity is at *pathological* level.

4.1 Overall Emerging Trends

Security: This was not a designated theme in the study but turned out to be the prime factor in HSE perception by management in the Nigeria petroleum industry.

Funding: This is very crucial in ensuring that stated objectives are achieved; it was identified as the instrument required for HSE culture improvement.

Technology: Managers in the study stated that technology can play a significant role in HSE culture development in Nigeria petroleum industry.

Research and Development: Management in the Nigerian petroleum sector is beginning to put a lot of consideration to research and development in HSE culture improvement. However, the problem of implementation is still quite evident because developing nations like

Nigeria find it difficult to institutionalize new ideas [29].

The study recommends that managers should swap their areas of operation from time to time so that they can also achieve a broader understanding of HSE culture in the different areas of operation. Managers should readjust their HSE management system in such a way that all employees are convinced that meeting HSE objectives will also help them in meeting their organizational objectives. HSE managers should encourage the participation of all relevant stakeholders in their poverty alleviation programs as well as biological remediation of already contaminated environmental sites. HSE managers should embolden employee involvement in HSE management so that they can make adequate inputs and participate in awareness creation campaigns. More effort should be put into having a comprehensive Nigerian health & safety law and regulations like they do in the United Kingdom. Furthermore, funds should be provided for training, research and development in Nigerian petroleum companies. Technological tools like fuzzy expert system should also be applied in checking HSE performance.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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APPENDICES

Appendix 1. Manager's interview questions

Health

1. What does the 'Health' in HSE mean?
2. How does 'Health' in HSE relate to occupational health?
3. Can you describe how Occupational health in your organization is improved by having an integrated/holistic HSE department?
4. How does HSE culture deal with issues like noise levels and adequate ergonomics for employees?

Safety

1. What does the 'safety' in HSE mean?
2. What are the components of an effective safety culture?
3. How does your organizations' HSE culture deal with issues like accidents and mishaps?
4. Can you describe how safety in your organization is improved by having an integrated/holistic HSE department?

Environment

1. What does 'environment' in HSE mean?
2. What are the components of effective environmental protection in HSE culture?
3. How does HSE culture in your organization deal with issues like pollution control, waste management and protection of flora and fauna?
4. Can you describe how environmental protection is improved by having an integrated/holistic HSE department?

Measurement Tools

1. What you we mean by 'HSE performance tools'?
2. What tools are used to measure HSE performance in your organization?
3. How effective are these measurement tools?
4. Describe efforts to better measure HSE performance.

Appendix 2. Some responses provided by managers interviewed

Manager 1:

Health

1. What does the 'Health' in HSE mean?
'Health' in health, safety and environment means the safety and welfare of employees in the organization. Therefore, issues on employee ailments that may arise as a result of the nature of their work, is dealt with under the health aspect.
2. How does 'Health' in HSE relate to occupational health?
Occupational health could be used interchangeably with health in this context because they basically mean the same thing.
3. Can you describe how Occupational health in your organization is improved by having an integrated/holistic HSE department?
Occupational health is improved by the holistic perspective of health, safety and environment culture because it makes it easier for me as manager to effectively carry out my duties. For instance, if we had different managers in different departments to deal with these issues it could be counterproductive and desired results may not be achieved.
4. How does HSE culture deal with issues like noise levels and adequate ergonomics for employees?
We deal with these issues according to our health, safety and environment policy statement which abhors inhumane treatment of all employees. We have stipulated levels for key indicators in this sector and try to ensure that we abide by laid down rules and regulations.

Safety

1. What does the 'safety' in HSE mean?
Safety means having a situation whereby employees do not enter position where their health is compromised or exposed to risks or hazards that can distort employee wellbeing.
2. What are the components of an effective safety culture?
An effective safety culture incorporates a safety policy which should be inculcated psychologically in your workforce so that anything they do reflects that policy. For instance, our employees know that they are required to always wear personal protective equipment anytime they are on site and do not have to be reminded about it since wearing safety equipment has inculcated psychologically in their mind-sets.
3. How does your organizations' HSE culture deal with issues like accidents and mishaps?
Our HSE policy stipulates that employees should follow laid down work procedures because our safety experts have identified the aspects of our work that have potential to cause harm. Even though accidents are unpredictable, sometimes injuries that occur are usually as a result of employee inefficiency because employees already knew, underwent training and understood the consequences of not following work procedure.
4. Can you describe how safety in your organization is improved by having an integrated/holistic HSE department?
Safety is improved by a holistic health, safety and environment culture through training facilities which are now undertaken to cover all the other aspects like health and environment. We try to ensure that these training activities are as comprehensive as possible so as to ensure that we are able to cover all that needs covered.

Environment

1. What does 'environment' in HSE mean?
The environment can be defined as the total biotic and abiotic factors found in our immediate work environment that is likely to be impacted by our refining activities.
2. What are the components of effective environmental protection in HSE culture?

For environmental protection to be effective in health, safety and environment culture, there has to be adequate consideration towards research and development as well as following all laid down instructions regarding environment protection.

3. How does HSE culture in your organization deal with issues like pollution control, waste management and protection of flora and fauna?

Issues on pollution control and waste management are well considered in this organization. We do this by try as much as possible to encourage work procedures that minimize the negative effect on the environment. For instance, if an Environmental Impact Assessment (EIA) determines that the impact of building a refining on the environment outweighs its benefits, we then have to reconsider the project because we do not want to disobey the excerpts of the Environmental Impact Assessment decree (1992) which is an important legislation in this country.

4. Can you describe how environmental protection is improved by having an integrated/holistic HSE department?

Having an integrated department improves the environment because we now pay more attention to environmental pollution more than ever before. The legal framework has driven away the previous norm of treating the environment unkindly. Now we treat the environment adequately and that will continue to improve as we develop in the area of research and technological advancements.

Description of HSE culture, measurement tool and performance

Improvement

Health safety and environment culture is the way issues like health safety environment... the way they are imbibed in our organization. We have to ensure that all our stakeholders including our employees and the community where we are located understand the importance of maintaining acceptable and adequate safety conditions...furthermore, security of our facilities are also important to us because they are effective when they are working and not when they are destroyed by hoodlums and vandals. We have a health, safety and environment department so that we can handle environmental health and safety issues according to the stipulation of the law and those of government regulatory agencies who monitor our activities. These regulators help us to measure our safety culture so that we know when we are in or out of order. Furthermore, security of our employees as well as our refineries is very important to us therefore maintaining adequate safety of our facilities and our workers is the main reason why this department is here. Managers come up with management structures and systems that instills proper health, safety and environment culture which in turn ensures that workers are safe, and all activities no matter how dangerous or hazardous they seem to be, can be carried out in a safe manner. That alone promotes our objectives and increases our productivity. Furthermore, it also provides benefits in terms of cost. If we decide to have separate departments for the three sectors, it will cost us more in terms of staff and resources. An effective health, safety and environment system will demand that every worker is deemed fit to work before he can go into the field and carry out any work. Therefore, issues like health of each individual worker is being considered for instance is the worker asthmatic? If he is there are certain areas of operation that he cannot work in? Is the worker afraid of heights? These factors have significant impacts on overall health, safety and environment performance and answers to these questions were made possible due to the integration these key related issues into a holistic umbrella.

Manager 2:

Health

1. What does the 'Health' in HSE mean?
Health deals with mental and physical state of employees in this organization.
2. How does 'Health' in HSE relate to occupational health?
Health and occupational health must have to mean the same thing because good health begets adequate occupational health.

3. Can you describe how Occupational health in your organization is improved by having an integrated/holistic HSE department?
Prior to the establishment of the HSE department, employee health was not really taking seriously. I mean, we have a clinic which just deals with injuries and physical harm or psychological issues. But the creation of a health, safety and environment department has provided us with the required avenue to maintain an enviable safety culture amongst our peers.
4. How does HSE culture deal with issues like noise levels and adequate ergonomics for employees?
We deal with noise and ergonomics the say way other companies in this sector does theirs: we ensure that levels set by legislations and industry benchmarks are not exceeded and that everybody is treated fairly and can make complaints to the adequate authorities as required by law.

Safety

1. What does the 'safety' in HSE mean?
Safety in health, safety and environment culture looks at how safe it is for employees to be able to carry out delegated tasks. It also involves establishing that employees are well prepared to take on these delegated tasks because knowing how safe the task is, prepares u for the task. Therefore, security is very important here.
2. What are the components of an effective safety culture?
An effective safety culture guarantees employee's wellbeing as well as facilitating environmental protection. Whatever aspect of work that negatively affects the environment is identified and dealt with carefully to prevent degradation and even it eventually happens, we are able to ameliorate the situation appropriately.
3. How does your organizations' HSE culture deal with issues like accidents and mishaps?
Our principal aim in health, safety and environment culture is that accident prevention but accidents do happen since nobody is perfect. We have emergency action plans that are clearly displayed in and around our facilities. These emergency action plans outline where employees are expected to converge if an accident occurs and how to contact emergency services. We also have our own emergency personnel who are always on standby to help take on emergencies, real time.
4. Can you describe how safety in your organization is improved by having an integrated/holistic HSE department?
Since our primary safety objective is to prevent accidents through drills we carry out twice in a month. Therefore we are able to identify possible accidents or anomalies that can occur in the workplace before they actually happen.

Environment

1. What does 'environment' in HSE mean?
The environment in health, safety and environment means the entire vegetative cover, atmosphere, landforms, living and non-living things near us.
2. What are the components of effective environmental protection in HSE culture?
Effective environmental protection in health, safety and environment culture should cover, water, land (Underground since we extract oil from the soil), flora and fauna and ensure that they are protected from our activities. This is because oil spills are quite difficult and expensive to remediate and the environmental costs are immeasurable.
3. How does HSE culture in your organization deal with issues like pollution control, waste management and protection of flora and fauna?
Our health, safety and environment culture shows us ways, steps and guidelines to control environmental impact. Under waste management, we have got professional that guide, treat our effluent discharge and also we experts that help to control our impact on the environment.
4. How does HSE culture deal with issues like noise levels and adequate ergonomics for employees?
Having an integrated health, safety and environment department certainly improves the environment as more attention is now being paid towards recovering sites that were polluted

due to our activities in processing petroleum products. We try to follow our health, safety and environment system as much as we can, so that we can be able to limit our impact on the environment to the barest minimum. This organization realizes the importance of environmental protection and tries our possible best to reduce impact as much as possible through following steps and guidelines stipulated in our policy statement. For instance, effluent discharge is key aspect that can pollute the environment so we have professionals who ensure that these effluents are treated before they are released...This also helps us to deal with pollution as well as protection of flora and fauna.

Description of HSE culture, measurement tools and performance improvement

Health, safety and environment culture is a phrase used in high risk industries to combine health, safety and environment matters in this organization, into a single term. This term HSE was coined when stakeholder realised that dealing with these issue singularly was not effective so they decided to join them since they are related. Therefore, this department is here to ensure adequate representation at the top level of this organization. This is because it is when top management is aware of the consequences of not attending employee safety and environmental protection, that adequate attention will be paid. We have a HSE department to ensure environmental protection, promote occupational safety in the workplace and also foster the health and security of our workers who are very important to us. Therefore, this department serves like a father figure for all employees in this organization as well as other stakeholders like our host community. So we are cut in the middle of things, my friend. Our main objective is to explore, extract and process petroleum resources. However, in doing this, we have realized that sometimes we have accidents, oil spills, employees falling ill or getting injured while working or even kidnapped by hoodlums and miscreants. We carry out safety audits from time to time to ensure that we meet required standards. This helps us a lot...a good example is the fire evacuation test we undertake weekly...so I think we are doing ok. HSE culture is very important to us because it can help us to mitigate of these issues we have to deal with to operate in this country. All in all, I would say that occupational health and safety issues and production definitely has a balanced equilibrium though now than we do experience anomalies and mishaps. Why? Because systems have been put in place, structures and guidelines must be followed in all stages of production as well as in all kinds of activities that cut across various departments of our organization. Therefore, I think there is definitely a balanced equilibrium. There are trends and I must say that they have been positive indeed. When I can into this company ten years ago, we did not have a health, safety and environment department. Back then, I was working as a quality officer. As the years progressed, health, safety and environment issues concerning research development and safety studies began emerging and the company realized that we needed a health, safety and environment department and here we are!

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Peer-review history:

The peer review history for this paper can be accessed here:
<http://sciencedomain.org/review-history/15401>