

smes: in the un global compact

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Case Studies

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Tanzania

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STATEMENT OF PROBLEM

Lack of adequate finance, knowledge, information and techniques for the promotion of cleaner production technology.

THE PRINCIPAL BEING ADDRESSED

Principle 8. Undertaking initiatives to promote greater environmental responsibility.

THE PROBLEM

Being an engineering company, the need to have a production system which ensures a safe and healthy working environment is of paramount importance that the production system does not pollute the environment by way of noise, waste and emissions.

Tanzania has an environment regulatory institution known as the National Environment Management Council (NEMC), which does not however have specific and clear guidelines for every industry.

Tanzania also has the Cleaner Production Centre which is small and has very limited outreach for Small and Medium Sized Enterprises (SME's). There are no elaborate benchmarks which could guide SME's to adopt best practices. There is therefore a possible risk of some

new customers demanding to know the environmental responsibility of our business as part of their business policies and practices.

ACTION TAKEN

The company has sought the expertise of the Cleaner Production Centre of Tanzania for an assessment of the production process and its impact on the environment with a view to recommending corrective action and long-term action.

The Cleaner Production Technology Centre (CPT) is still carrying out studies so as to recommend the intervention strategies. The studies are expected to be ready within two months.

The policy and actions will be undertaken once the recommendations have been received from the experts. All the 23 employees of the company will be involved and neighboring industries will be involved so as to ensure that the wider environmental aspects are taken on board.

Progress will be measured by the acceptance by national environmental authorities and by the company's competitive advantage through cleaner production technology.

The estimated cost of this exercise is Tshs. 1.6 million (about USD 2000). The benefits have been mentioned above i.e. compliance with national environmental policies thus improving the image of the company and using that as a competitive advantage.

At this juncture it is premature to state what we have learned. Suffice it would be to say that financial constraints could crop up and the company will have to secure bank credit if necessary.

Possibilities will also be explored of sharing the costs with neighboring companies as we stand to mutually benefit from mutual efforts in addressing environmental issues.

It is expected that other companies may wish to learn that a responsible environmental policy and practice can become a factor of competitive advantage. An environmental policy and practice can become a factor of competitive advantage. An environmentally responsible company is a good corporate citizen and this is factor which may improve marketing of our goods and services.

1. As said before in our submission, Tanzania has the cleaner production centre which is small and has very limited outreach for small and medium size Enterprises. However, the Government recognises the need for educating its people and enhancing awareness to its industries whether big or small, the need for environmental control for all its industrial activities to protect people, animals and the vegetation against hazardous wastes and to make the environment in general a better place to live in.

2. In general, enforcement of cleaner environment has many advantages to the individual industry or SMEs and to the neighboring community, typically in the following:

- a. Uncontrolled waste can be very costly in terms of hazards caused to people working in the industry/SMES and to the community.
- b. Some of the waste, if properly managed can bring financial benefits to the industry or SMEs. For example recycling of brass/branze chips to cast broze, recycling of steel off cuts to cast Iron or cast steel. There are several other materials that can be recycled to other

useful products.

- c. Observation of cleaner environment will improve the image of the company or SME and the products. Good products and good image of a company can improve the relationship with the local community and hence better access to financing and markets.
- d. Cleaner environmental production techniques can increase overall energy use efficiency and reduce risks to humans and the environment.
- e. Other advantages include pollution control, reduced equipment repairs/modifications and proper waste disposal.

3. Regis Engineering and construction Company Ltd is located in an area earmarked for industrial activities. However, a few individuals have built their residential quarters in the area though unauthorized. This community is likely to be affected by engineering activities in our company.

4. The Company has identified the following specific environmental impacts.

- a. The factory is built alongside a murrum road which becomes very dusty during the dry seasons and especially when vehicles drive along at high speeds. The dust is blown through the open windows into the factory.
- b. The factory is built by concrete blocks plastered both on the outside and inside walls but not painted. Some of the cement and sand can chip and be blown out by wind. These particles can be inhaled by workers in the factory.
- c. The factory is roofed by using steel trusses and asbestos sheets. These asbestos sheets do give small amounts of asbestos dust especially when wind blows across. Asbestos sheets were the most available to roofing materials in the country when the factory was built in 1992. However, the asbestos dust if inhaled continuously for a long time can cause health problems.
- d. In the machine shop operations the following environmental impacts are experienced:
 - (1) Carbon dust/chips from machining of cast iron.
 - (2) Fumes from machining steel materials.
 - (3) Steel chips from machining steels.
 - (4) Bronze/Brass chips from machining Bronze/Brass shafts or cast materials.
 - (5) Steel off cuts.
- e. In the welding/fabrication shop the following are identified hazards:
 - (1) Noise from disc angle grinders when grinding welded metals.
 - (2) Fumes, presumably containing Co, Co₂ and other gases.
 - (3) Grinding wheel/steel and rust dust.
 - (4) Steel and other metal off cuts.

- f. In the paint shop the following are experienced:
 - (1) Fumes from paint spray.
 - (2) Fumes from thinners.
 - (3) Hazardous chemicals for surface treatment and metal surface finishes.

5. From the above assessed environmental problems, the following has been done or is planned to be executed in the future:

- a. The company has plans to build a concrete wall all around the factory. This will bring about the following advantages:
 - (1) To reinforce factory security from neighbouring community and others.
 - (2) To protect neighbours from factory noise and fumes.
 - (3) To reduce the amount of dust from the road coming into the factory.
- It is expensive to build such a wall all round the factory premises. At least work has started on one side along the road.
- b. The company intends to have discussions with the local area government officials and the Member of Parliament of the area to improve this road by upgrading it to a tarmac road. This may take a long time to achieve. However, if it is done, it will bring the following advantages:
 - (1) It will make accessibility to the factory easier for customers and our workers.
 - (2) The dust blow will be much reduced.
 - (3) Vehicle transport to the area will be more frequent because of good road.
- c. The Company intends to spend some money in the near future to paint the walls, at least the inside wall to prevent the sand/cement chips which can be blown around.
- d. The Company also plans to change the asbestos roof to put GCI Sheets. This is not possible now because of funds limitations.
- e. As for the workers protection in the machine shop, welding and fabrication shop, the following safety measures have been taken:
 - (1) Workers are provided with coveralls to protect their clothes.
 - (2) Workers are provided with safety glasses, hand gloves, mouth and nose musks and earplugs to protect themselves. All workers are encouraged to wear factory boots to guard them against stepping on sharp objects.
- f. In addition to the above safety arrangements, there is a first aid kit with kits/medicine for treating injuries and simple drugs like panadol.

- g. Workers are provided with a meal for lunch and a glass of milk to improve their health. Actually, the factory keeps a few dairy cows in a shed near the factory area to produce fresh milk for the workers.
- h. Regarding waste product disposal, the following is done:
 - (1) Cast iron chips and steel chips are collected in a bin container, which is collected once a week and disposed off in an area authorized by the city council. These are normally pits that need filling after mining stones and aggregates.
 - (2) Steel off cuts are collected in a metal container and recycled to produce cast Iron.
 - (3) Brass/Bronze chips and off cuts are collected in a container and recycled in a foundry to produce cast Brass/Bronze.
 - (4) Waste metal and plastic containers are collected to be disposed off weekly in a convenient authorized dumping area.
 - (5) The factory does not have much waste in liquid form. However, the factory floor is washed by water and thinners to clean greases, paints and dust from the floor once per month. Normal broom cleaning is done daily.
- j. In order to improve the surrounding environment generally, trees and flower shrubs are planted in some orderly manner to provide shade and make the place attractive.

6. Though detailed cost analysis has not been done to estimate the costs or savings of the environmental impacts, however, from our qualitative assessment, the following has been achieved:

- a. We have not received any complaints at all from our neighbours about any disturbance from the factory.
- b. Labour turnover has been minimal in our factory. Every worker is happy to stay on.
- c. Meals for lunch and a litre of milk seem to be a credible incentive.
- d. Whilst other factories have often been harassed by industrial health inspectors our factory has experienced none of such harassments.
- e. We have received a number of applications from engineers and technicians waiting to be employed by our factor. However, we have our limitations as to the number we can employ at a time.

7. To respond more specifically to the questions posed viz. "Are generic environmental management tools appropriate?". The answer is yes, however, since SMEs level of production is much smaller than larger production Enterprises, Environmental management is not much of a problem. Basic management tools should be sufficient for any typical SME. However, an SME dealing with production of materials of which the waste is hazardous or toxic, such an SME will need more exotic management tools.

8. "How can the company best employ its existing limited resources to best effect?". In response to this, the following can be considered:

- Carefully prepared business plan.
- Put in place machinery or management to review the business constantly with respect to changing laws, business environment (such as competition), and demographic variables.
- Periodically evaluate internal strengths and weaknesses, and external opportunities and threats (SWOT ANALYSIS).
- Exercise discipline in bookkeeping and auditing.
- Maintain team motivation.

- Ensure customer satisfaction through timely deliveries and quality production.
- Maintain healthy customer relationship.
- Advertisement and promotion through different media.

9. Response to the last question viz. "Has the company been able to recover its initial investment through efficiency gains or a reduction in resource costs?". The reaction to this question is yes, to a much smaller extent. However, we hope to improve on this through the following steps:

- a. Introduction of better inventory management.
- b. More training to staff.
- c. More efforts on marketing planning.
- d. Use of IT (Information Technology) as much as possible through E-mailing, Internet use, Inventory control, Financial Control and Personnel Records.
- e. More efforts in maintenance of plant and equipment. This includes vehicles for the Company.