

## **My View on the Impact of ISO 14001 to Industries**

My professional involvement in the environmental field was more of a necessity rather than a choice. As a fresh chemical engineering graduate, I decided to take the first reasonable job offer that I would receive. Fortunately, a large Japanese semi-conductor company hired me in 1999.

During that time, certification to ISO 14001 Standard, an internationally recognized standard on Environmental Management System, was on the rise in the Philippines. Multi-national companies trying to demonstrate responsible production through resource management and pollution prevention were working hard and spending a lot to ensure that they are certified against the Standard. Through this certificate, the companies are able to demonstrate to their costumers that they are considering the environmental impacts of their production.

The Standard required three basic commitments in the environmental policy of the company, namely, pollution prevention, regulatory compliance and continual improvement. The whole environmental management system revolved around ensuring that this policy is achieved to through the satisfying the requirements of planning, implementation and operation, checking and management review as stated in the Standard.

I was involved firsthand in studying the different environmental issues and the latest best available technology to combat these environmental issues. Different alternatives were researched to address resource depletion and waste management. The practical application of the hierarchy of waste management became apparent to me. It was challenging to come up with programs that can result to elimination so that wastes will not be generated in the first place. Since elimination is not always feasible, the 3R came into the picture – reduce, reuse, recycle or reclaim. Hazardous wastes underwent treatment. Disposal was the last option. Most of the time, financial considerations became the determining factor on whether a technology or program will be implemented or not. Sometimes, it seemed that disposal is the easiest and most economical means to manage wastes. Innovative solutions were implemented to combat these restrictions. This came mainly from employee involvement and suggestions. Results were remarkable. There were significant increase in the use of resources, reduction in wastes and increase in recyclables. In the long run, it translated to cost savings for the Company.

Regulatory compliance is also an element of the ISO 14001 Standard. Companies, particularly pollution control officers like me, approached the government's environmental agency to clarify laws and to ensure compliance. At first, it was a nightmare to deal with the government. At that time, environmental laws were newly enacted and not many companies were complying since the government was not monitoring anyway. But the commitment of the companies to comply with legal requirements as required by the Standard prompted them to find solutions to ensure compliance to the different stipulations of the regulations. They work hand-in-hand with (and sometimes demanded) the government to provide means to comply with the requirements of the law. After much effort, the

government responded positively by enforcing a more comprehensive permitting system, ensuring waste disposal facilities are available, allowing transboundary movement of wastes, providing training and awareness on environmental compliance and many other efforts that the companies can use in this regard. This also led to a more transparent relationship between the government and the industry. Instead of policing the industry, the government promoted partnership with the companies to encourage compliance. In fact, industries are now part of the consultative bodies working toward more plausible environment regulations.

I find continual improvement an interesting part of the implementation of an environmental management system in the industry. Monitoring and measurement results can show significant improvements in the environmental performance of the company if they chose to put this as their priority. It can be as simple as waste segregation and recycling or a more complex issue on greenhouse gas emissions reduction. The company sets its own targets and programs to ensure that these are achieved. Others would argue that some companies set environmental targets are too low and the companies can achieve more if they wanted to. But looking at the larger picture, it is much better to have a little improvement than have a negative impact on the environment. At least, the companies are trying to find solutions rather than add to the problem.

The most amazing part is that employees get training and awareness on environmental issues. They start to realize their environmental impacts and how they contribute to environmental pollution as individuals and as company employees. Many employees exert efforts to prevent pollution in practical ways, not just at work but also at home. In fact, I was also influenced to take up additional courses in environmental engineering because of the vastness of information I gathered as part of my work. Employees also get to participate in the environmental projects. It can be as simple as bringing recyclable materials for exchange and tree planting to a more intensive coastal shore clean-up and community awareness campaigns on environmental issues. Awareness increased along the way and it spilled over to the families of the employees and communities within the vicinity of the companies.

The companies did not stop there. They also influence their contractors and suppliers to implement an environmental management system. Some companies required contractors and suppliers to be certified against the ISO 14001 Standard before they can do business together. The companies also audit and inspect their contractors and suppliers to ensure that their system is working.

Even though environmental field was not my first choice, I am glad I was able to experience how a good system can achieve pollution prevention in the industry. I learned that a good environmental management system is not just based on documents. It has to be working and improving over time. Now, I am totally committed to continuing my environmental endeavours in the industry. It's my own way of contributing to cleaner production and pollution prevention.

What is my point in all of these? Industrialization doesn't necessarily have to result to massive environmental degradation. Responsible production is possible. The answers to environmental issues are within our reach. It's just a matter of implementing a system that would work to ensure that these issues are addressed promptly. If all companies (or individual for that matter) will take time to

understand their environmental impacts, how they contribute to the global warming, wastes problems, resource depletion and all other environmental issues and find solutions to these, then the threat of environmental disasters may be minimize and eventually abated. We all need the environment but we also want industrialization and advancement (because I am assuming majority would not be willing to go back to the caveman era). We just need to find that balance and act responsibly. Each one of us can do our part in our own way.... but it has to be now.