Cleaner Production, Vietnam's Champion for Environmental Sustainability

By: Catherine Brassaud

Rapid economic and demographic developments in Vietnam have made a dramatic impact on the environment. With inadequate waste treatment infrastructures and management policies, pollutions of natural resources such as water sources have reached critical levels, leading to growing concerns for human health. There is now a critical need for cleaner solutions and Vietnam is turning towards cleaner production.

Over the last decades, only a fraction of the increasing quantities of waste products generated has been treated before disposal. Domestic, industrial and agricultural wastewater undertakes, at best, minimal pre-treatment such as removal of floatable, oil and grease, before being discarded into the surrounding environment.

Effluents discharged untreated pose dramatic health risks to the public by contaminating surface water, a major source of drinking water for low-income communities. A large percentage of deaths, especially of children, are caused by transmission of waterborne diseases.

Diarrhoeal diseases that cause the death of over three million people annually may be transmitted through contaminated drinking water. In Vietnam, the high faecal pollution of surface water led people to give it up for groundwater. Unfortunately, in Northern Vietnam the latest naturally contains arsenic, a major cause of skin diseases and cancers.

Vietnam is craving for low costs, cleaner solutions – that is technologies and procedures that have the potential for significantly improved environmental performance compared to the solutions they replace. The country is now playing the card of cleaner production.

According to the United Nations Environmental Programme (UNEP), cleaner production is "the continuous adoption of integrated environmental prevention strategy to industrial processes, products and services to increase ecological efficiency and minimise risks to the human population and the environment."

Said Carrie Mitchell, a Research Associate from the University of Toronto carrying out her Master's thesis on cleaner production at the Institute of Environment and Resources (IER-CEFINEA), Vietnam National University of Ho Chi Minh City: "basically, cleaner production is one of a number of pollution prevention tools that can be used by firms to reduce or even eliminate wastes in the production stage as apposed to merely correcting for them though end-of-pipe measures."

There are a number of ways cleaner production can be utilized in a company, starting with something simple such as good housekeeping and moving to more complex process modifications that may require new technology investments.

Although initial investments may be costly, firms will soon see return on investments. "I see the goal of cleaner production as the reduction of wastes by way of economic incentives," said Mitchell. "There is a strong financial argument for why a firm would want to implement cleaner production technologies: not only does it prevent pollution and wastes, but it also has the potential to save a company money via energy conservation, water reduction and lower waste disposal costs."

Added Dr Nguyen Phuoc Dan, the IER-CEFINEA's cleaner production expert: CP technologies and procedures enable firms to minimise waste generation, while saving energy and material, hence cutting on production costs.

With such promising results, cleaner production is becoming the champion for environmental sustainability in Vietnam and the government has drafted a National Action Plan for its implementation throughout the country. "It is seen as a way to prevent further environmental degradation while at the same time helping the economy… basically a win-win situation," emphasised Mitchell.

But there is a lack of market demand for cleaner production. Although the Vietnam Cleaner Production Centre (VNCPC) of Hanoi is trying to generate a demand for cleaner production services through firms increased awareness, it seems that the private sector's demand is still low.

According to Dr Nguyen, small-scale factories, which represent a significant part of the Vietnamese industry, cannot afford to invest in foreign, costly technologies. There are merely able to focus on housekeeping and low-cost measures. Furthermore, there is strong evidence that many companies that have implemented cleaner production do not follow on new procedures. Lastly but not least, added to a lack of awareness among technical staff, Vietnam has not yet established incentive policies to enforce cleaner production.

Added Mitchell: "with huge financial incentives for companies to avoid pollution charges, cleaner production is easier to understand and subsequently being adopted. In addition, positive social and environmental behaviours such as being "environmentally friendly" does not make good business sense in Vietnam yet. There is such a focus on economic development, that positive environmental behaviour just isn't a firms' top priority."

In Vietnam, cleaner production is donor- rather than company-driven. Thus, it appears that the success of cleaner production is limited to demonstration projects funded by international agencies that finance new technologies and provide free technical assistance.

Stressed Mitchell: "Unless cleaner production is supported domestically through financial, educational and governmental institutions, there is little hope for its success in the long run. I see little evidence that companies are willing to pay for consultants to do a cleaner production audit and then purchase the necessary technology to improve production process. This is due to a lack of awareness and also to the highly competitive nature of Vietnamese firms."

But some organisations such as the IER-CEFINEA have defined strategies to help the industry to access to cleaner production technology. As companies are being required by the Department of Science, Technology and Environment (DOSTE) to implement end-of-pipe technologies for wastewater treatment, the IER-CEFINEA helps to implement cleaner production while selling the mandatory technology.

"This is an interesting way to implement cleaner production, especially given the fact that it is often hard to convince company officials on its merits. As they have to

Continued on page 5

Continued from page 4

buy the wastewater treatment technology anyway, they really have nothing to loose by implementing cleaner production along with it," said Mitchell.

"Working in partnerships, between the public and private sector, is the best way to bring water to the poor", highlighted Al Fry author of the World Business Council for Sustainable Development's report "Water for the Poor". While the IER-CEFINEA is applying this strategy, it also plays a key role in the promotion of cleaner production through the VNCPC, whose mission is "to play a catalytic and coordinating role in promoting cleaner production in Vietnam".

While efforts are being made to increase the acceptance of cleaner production, Vietnam should not forget to look at the bigger picture, integrating other pollution preventing tools such as green labelling, industrial ecology and environmental management systems such as ISO 14000.

APRCP ASIA-PACIFIC ROUNDTABLE for CLEANER PRODUCTION

An APRCP Newsletter