



## Project Completion Report: Cambodia Technical Air Quality Monitoring Guidelines

- **Project Details:**
- **Short title: Cambodian Air Quality Plan**
- **Short problem: No way to measure or monitor dangerous air pollution**
- **Short solution: Technical experts bring a proven system online**
- **Quote: A clear plan to clear the air**

<b>Location:</b>	Cambodia
<b>Contaminant:</b>	Sulfur dioxide, nitrogen oxides, total suspended particulate, carbon monoxide, lead, ozone, photochemical oxidants, dioxins, soot and dust
<b>Project Duration:</b>	2004—2005
<b>Project Cost:</b>	\$20,000
<b>Implementing Partners</b>	Ministry of Environment— Department of Pollution Control

- **Problem:**

Cambodia is undergoing rapid development and subsequent population and industrial growth. Air quality is deteriorating as a result of industrial and handicraft processes as well as fossil fuel combustion. As of 2004, air quality monitoring activities were inadequate as there was no established technical guideline. While environmental conditions and human health are being threatened by poor air quality, setting technical monitoring guidelines was of utmost importance. Blacksmith Institute worked with the Cambodia Ministry of Environment—Department of Pollution Control on setting guidelines to help governments derive legally enforceable air quality standards. Moreover, the organizations devised action plans to carry out local control measure and to advise environmental health authorities and professionals.

Many scientific studies have linked breathing polluted air full of particulate matter to a series of significant health problems, including: aggravated asthma, coughing, painful breathing, chronic bronchitis, decreased lung function, and premature death. Acceptance

and promotion of these guidelines was thus an extremely important step in developing a full air quality monitoring and enforcement system in Cambodia.

- **Solution:**

The Cambodian Ministry of Environment's Department of Pollution Control started the process by monitoring and identifying the sources of air pollution, then followed by creating guidelines and regulations relevant to the problem. Lastly, they reviewed and updated the draft guidelines. Blacksmith Institute funded the process of setting these guidelines while the Department of Pollution Control was responsible for creating an inventory of air pollutants, drafting and implementing policies, enforcing the standards, and evaluating progress by way of publishing regular reports. To ensure the quality of the set guidelines, Blacksmith referenced similar standards from various other Asian countries such as Japan and Thailand, where such an approach had already proven effective..

- **Results:**

Blacksmith's technical experts assessed each individual industry's manufacturing practices, waste characteristics, and air pollution load. The important local industries include pulp and paper mills, glass manufacturing, oil and gas development, printing, sugar manufacturing, tanning and leather finishing. Other pollution sources include vehicle exhaust, and the open fires associated with logging and farming practices. In all cases, Blacksmith recommended appropriate methods for pollution prevention, control, and reporting.

The creation and institutionalization of technical air quality standards have now made possible a precise and quantifiable monitoring of the human health impact of air pollution in Cambodia. This means that it will now also be possible to improve air pollution conditions based on sound science..

- **Follow-up:**

From this point on, local regulatory agencies, government, and industries must work together to perform the necessary reporting and inventory measures. With appropriately trained experts enforcing Cambodia's new air pollution standards, public health conditions in that nation should improve significantly..