

- Focus India: Agri-Food
- India Market Report: Agri-Food

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## ENVIRONMENTAL PRODUCTS AND SERVICES

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### Opportunities

Global competition, increased public awareness, better enforcement of environmental legislation and realization within the industry of the need to be eco-friendly make India one of the most attractive markets for environmental equipment and services. The current size of the market is estimated at US\$3.1 billion and is expected to grow at an annual rate of 20 to 25 percent. Opportunities exist in prevention, control and remediation of air, water and land pollution.

The prime sources of air pollution in India are automobiles (mainly two-stroke engine vehicles) and industrial units involved in thermal power generation, steel and cement making. To tackle pollution caused by automobiles, the Indian government has made it mandatory that, from

April 1, 1995, four wheelers must be equipped with catalytic converters, and it has also introduced unleaded gas at selected outlets. Suspended particulate matter (SPM) is the main cause of concern in the case of industrial units (fly ash in the case of coal-based thermal-power generation; coal burning and limestone crushing in the case of cement making).

The market size for air pollution control equipment is estimated at US\$650 million. Though domestic firms manufacture a variety of equipment, opportunities exist for technologies for utilization of fly ash, flue gas desulphurization, gas scrubbers, SPM reduction processes, microprocessor based energy management systems for electrostatic precipitators, pulse-jet fabric filters, instruments for measuring toxic/hazardous gases, portable instruments, etc.

It is estimated that 70 percent of all available water in India is already polluted. Untreated discharges of municipal sewerage, industrial effluents (from tanneries, dyes and intermediates, pulp and paper, caustic soda, etc.) and agricultural run-offs carrying residual pesticides are accentuating the problem. Out of 3245 cities and towns, only 21 have some kind of sewage treatment facility. According to one study, the market size for this segment is estimated at US\$2.1 billion. It would be much more if waste-water treatment facilities are to be considered for Indian cities. Canadian companies have opportunities to supply equipment and technologies for waste water/effluent treatment in various industry sectors like tanneries, dairy, textiles processing, pulp and paper, coal beneficiation, refineries. Reverse osmosis and ultra violet treatment technologies, and portable water and soil pollution monitoring kits also have a market in India.

Solid and hazardous-waste management is also one of the high-growth areas. Synthetic fertilizers and pesticides are a major cause of increased nitrate levels in the soil and water. Organic and inorganic chemicals used in industries like pharmaceuticals, fertilizer and pesticides, plastics, textiles and detergents are also a cause of hazardous waste. The market size is estimated at US\$180 million. Opportunities exist for common incinerators for industrial wastes, biotech treatment of toxic waste, waste pre-treatment systems, equipment for removal

