THE STATUS AND PROSPECT OF HEALTH RISK ASSESSMENT FOR THE ENVIRONMENTAL POLLUTANTS

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The risk assessment is a probabilistically process to estimate how much of the risk disease outbreak intensity would increase when an individual or population was exposed to the hazardous substances or environments in a certain period of time. Until recently, there had been extensive studies on health risks in terms of the decision-making process for the environmental policy. The health risk assessment is continuously discussed in more specific applications in published reports and it has become a common topic for many scientific reports. The National Academy of Sciences of the United States published initial guideline book in 1983. EPA had emphasized on the framework of the health risk assessments and developed systematic assessment process for various environmental pollutants. The health risk assessment processes were composed of 4 steps: (1) hazard identification, (2) dose-response assessment, (3) exposure assessment, and (4) risk characterization. The health risk assessment processes for environmental pollutants were introduced in mid 80's when the domestic environment policy was only concerned in accomplishing the environmental standards and limited technological treatments for each environmental media. Subsequently, more scientists displayed interests and conducted more extended studies on the basis of the systematic technique that established the current stage of the environmental health policy, which centralized the concept of the health issues beyond barely measuring up to simple environmental standards. The policy administrators had reviewed the risk assessment results in terms of the financial and technical perspectives as well as the social-political position for the decision-making of the environmental policy. Thus, the ultimate goal of the health risk assessment is to decrease the level of hazard and to induce preventions, which would be