

平成26年度 環境科学院 修士論文内容の要旨

Assessment of Air Pollution and Prevention in Urumqi, China
(中国・ウラムチにおける大気汚染とその防止に関する評価)

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Air pollution has become one of the most crucial environmental problems for Urumqi City with the main sources being industry, power generation and transportation which resulted in high incidence of respiratory diseases and corresponding concerns by affected residents. As a result, this study was conducted with the view of determining the level of awareness of Urumqi citizens regarding air pollution and how this can be used to develop recommendations for implementing new policies. Research was also conducted in the cities of Kitakyushu and Sapporo, both of which faced similar issues in the past but overcame them largely through citizen's awareness and educational programs. Data was collected through structured group and key informant interviews (n=20), direct observation through site visits (n=4), and questionnaires comprised of closed-ended questions (n=309). Results showed that citizens could accurately identify the main sources of pollution and that their health was mainly affected by respiratory ailments and when compared with published and official data showed no significant differences. A striking 87% of the participants were aware of the government policy for switching heating fuel from coal to natural gas and 90% of them are optimistic that it is useful, while being recognizing that renewable sources of energy should be explored to substitute natural gas. Equally, respondents are supportive of the motor vehicles policy with 80% of them willing to submit their vehicles for the required test. An overwhelming 96% of the citizens considered that they are equally responsible to protect the environment and only 32% of them consider that the measures of the Urumqi government are adequate. In their view, more emphasis needs to be placed on public awareness (39%), local government support, (25%) and information sharing (15%). Environmental education was highlighted and citizens believed that this should begin from the primary school level. Results indicated that both the local government and its citizens are paying little attention to the industry sector which ironically accounts for most of the SO₂, NO_x and dust in the air. Therefore, it is recommended that a vibrant policy be enacted to curb air pollution from industrial sources.