
Abstract

Strategy for Supporting Green Industry and Environmental Mainstreaming in Developing Countries

Soyoung Lim(sylim@kiet.re.kr)

Hyunkeong Kim(keongkim@ketep.re.kr)

Jihyun Kang(jihyun.kang@kiet.re.kr)

This study provides a strategy for Korea in supporting green industry and environmental mainstreaming in developing countries. For this, each partner country constructs a methodology that reflects the demand of the developing country and the preference of Korea when composing the green industry portfolio. At the same time, it offers a plan to consider the environment through the entire processes of all types of support in development cooperation programs other than specific aspects of supporting green industry.

This study applies the Technology Needs Assessment methodology developed by the UNFCCC, developing the strategic framework to

select the order of priority considering the demand of the developing country and reflecting the national interest of Korea. The framework is largely divided into and operates in six stages. First, among Korea's partner countries, a group of countries that needs green industry support is drawn, and a specific country is selected using the same framework. In the next stage, the selected country's priority sector or technology for green industry support is verified. At the same time, criteria to determine the order of priority for green industry support should be separately appropriated, giving weight that represents the degree of importance for each. After scoring the priority sector or technology according to the criteria, the weight of the criteria is applied to decide on the final order of priority.

The criteria of selection for order of priority that should be considered in supporting green industry in developing countries has been deduced. While the five evaluation criteria of the DAC provided the basic frame, they have been amended to suit the purpose of this study. As a result, "relevance", "effectiveness", "efficiency", and "sustainability" have been established as the main categories, and within each category, criteria that should be considered from the perspective of the donor country and the recipient country has been deduced and set as sub-categories. A survey has been conducted with 20 experts of development cooperation or green industry within Korea to calculate through AHP the weight that represents the importance of each criterion.

When the survey was analyzed in its entirety not divided into groups, the weight of "effectiveness" index was calculated as the

highest, followed by “sustainability”, “relevance”, and “efficiency”. Meanwhile, when those who were questioned were grouped according to public institution and academic experts and private sector experts, the analysis showed great difference between the two groups. While the public institution and academic experts saw sustainability as the most important element, private sector experts overwhelmingly selected effectiveness of the project as the most important criterion. Particularly, during the evaluation of the importance of sub-categories, private experts emphasized the effectiveness aspect of increasing Korea’s national interest within the effectiveness of the project. In contrast, public sector experts decided that the will of the recipient country to push the project. In other words, they emphasized sustainably maintaining the effect of the project by the recipient country even after the end of the project.

In order to verify the utilization of the framework, this study conducted a case analysis with Vietnam. To establish Vietnam’s candidates for support, the UNFCCC’s Vietnam TNA, Korea’s Vietnam CPS, and Vietnam’s National Target Program were used as references. As a result, wind power, biogas, reforestation, integrated river management, drinking water supply and sanitation, and solid waste management programs were selected as analysis targets for order of priority for support. These programs were scored according to each selection index, five points being the maximum. The final order of priority for supporting green industry was determined using these scores and the weights of the indexes already established by AHP analysis. Public/academic and private combined, the results

showed that drinking water supply and sanitation program was the most promising support program for Vietnam. In contrast, the results showed integrated river management was the least preferred program from Korea's perspective.

Through this research, three policy challenges were derived. First, there was a lack of understanding of development cooperation projects by the domestic private sector experts related to green industry. They lacked awareness of the aspect that the aid project had to be consistent with the policies of the developing country. Next, there was a lack of awareness by the developing countries about green industry that leads to growth. Also, this study pointed out the confined present conditions of the base of the domestic experts on green industry development cooperation.

In order to resolve the above policy challenges, this research provides five essential elements of strategy. One, we need to pursue green growth as a universal value that emphasizes growth and poverty reduction. Two, country-driven approach should be adopted by the developing country for vitalizing the green industry. Three, we need to actively participate in understanding and exploring the demand for green industry in developing countries. Four, we must pursue life-cycle approach that considers the environmental issue from the initial stages. Five, we need to find effective investment options to continue projects. By proposing such strategies, this study will act as a guide that can be referenced when Korea's departments related to development cooperation plan and execute projects for supporting green sectors.