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Research Report on Feasibility Study of Green Procurement Tool

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Research Report on
Feasibility Study of Green Procurement Tool (GPT)

Undertaken By

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Co-Sponsors

APEC Cooperation Network on Green Supply Chain Tianjin Pilot Center
(Tianjin Pilot Center)

Good Environmental Choice Australia(GECA)

Korea Environmental Industry & Technology Institute(KEITI)

Vietnam CEL Consulting

The Sustainability Consortium (TSC)

China Environment Joint (Beijing) Certification Center (CEC)

Supported By

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TABLE OF CONTENTS

	Page
I Background and Content	2
II Objectives	3
III Progress and Results	4
IV The next steps for the project	8

Research Report on Feasibility Study of Green Procurement Tool (GPT)

I. Background and Content

1.1 Background

The second half of the 20th century has seen frequent climate changes and natural disasters. Environmental issues start to capture global attention. According to the research of the Sustainability Consortium (TSC), global production and use of consumer goods account for more than 60 percent of all greenhouse gas emissions, 80 percent of water usage, and two-thirds of tropical forest loss globally. It is imperative that economies address the production, use, and disposal of consumer goods. A sustainable world requires sustainable production and consumption.

Since the early 1990s, governments, industrial associations and multinational corporations successively show concern for environmental issues connected to supply chain. They hope that a deep-level environmental management from supply chain angle can assist control on environmental impact in greater scope. APEC economies value sustainable growth and upstream-downstream cooperation throughout the supply chain worldwide. APEC members have reached low tariff agreement on 54 environmental goods and implemented it to facilitate green trade growth among economies. Green Supply Chain Management is to implant environment awareness and efficient utilization of resources to each sections along the supply chain, with the goal of maximum efficiency in resources utilization, minimum impact on environment, and system benefits optimality. Green Supply Chain management requires that all the suppliers, manufacturers, wholesalers, consumers and recyclers along the supply chain pay attention to environmental protection and resources utilization to promote the coordinated development of economy and environment, and to ultimately realize the 'win-win' of economic benefits and social benefits.

Green procurement is the core of green supply chain management. A well-regulated procurement would have a positive impact on the environmental performance of the supply chain. TSC cooperated with Wal-Mart in North America to start evaluation of Wal-Mart's consumer goods suppliers from 2014. By now, over 4,000 surveys have been completed against more than 2,500 suppliers, covering 53% of sales fields. Three years later, major suppliers of Wal-Mart have made exciting improvement in the green performance. Evaluation tools have delivered great results, and become key methods for improving the environmental performance of the entire supply chain.

1.2 Content

The research project of Feasibility Study of Green Procurement Tool was endorsed by APEC Secretariat in March 2016. The project aims to learn from the successful practice of the green procurement tool (GPT) in North America. Tianjin Green Supply Chain Center (TGCC), the working body of APEC Cooperation Network on Green Supply Chain (Tianjin Pilot Center), cooperated with TSC to introduce the tool to China and develop a GPT adapting to Chinese market, which would then be used to evaluate suppliers' environmental performance. Through summarizing experience of localizing GPT in China, TGCC and the partners have developed a set of green procurement evaluation methods that has universal application and also fits enterprise development characteristics in all economies.

GPT utilizes scientific approaches to identify the environmental impact, greenhouse gas emission, and raw material use of varying products in their life cycle. Key Performance Indicators (KPI) and an IT platform have been developed in strategic cooperation with China Environmental United Certification Center Co., Ltd(CEC). The IT Platform is in trial operation, and sustainability evaluation and results can now be queried online.

GPT is to access the overall green performance and environmental performance of suppliers. KPI system, the core of GPT, is a standardize framework covering the entire value chain. GPT allows analyzing of key environmental and social issues during the total life cycle of products, and offers a platform to communicate and evaluate environmental information of each stage of supply chain. Scientific analysis of hot environmental issues of products can pinpoint opportunities for improvement in their life cycles.

Suppliers can fill in KPI-related information on the GPT platform online. Information input will be analyzed to generate scores and reports for users. The tool enables suppliers to understand what they can improve with respect to environment, and make well-targeted strategies to level up their environmental performance.

II. Objectives

By setting supplier KPI and displaying KPI information provided by suppliers on the IT platform, GPT can have a positive impact on procurement behavior and further improve suppliers' environmental performance.

1. To promote both public and private sectors to implement sustainable/Green procurement transformation;
2. To increase awareness, knowledge and capacity of buyers on the suppliers' sustainability performance and their products in procurement activities;
3. To enhance the communication between buyers and suppliers on sustainability and green improvement.

III. Progress and Results

3.1 Basic Investigation and Research

May-June, 2016, this project starts a feasibility study on the localization of supplier sustainability evaluation methods that TSC developed for Wal-Mart and has applied to suppliers of its branches in North America. The focus is placed on sorting and analyzing current situations for green procurement by Chinese government at different levels and enterprises, and domestic standards on green procurement. By pooling practices of local enterprises in green procurement, and studying the implementation of overseas standards in China, Tianjin is selected as a pilot city for developing and operating GPT.

Green procurement by Tianjin municipal government and enterprises has been surveyed from a market point of view. Taking into account of China's existing policies and procurement products, the project has selected pilot industries to apply GPT, and develop supplier KPI tailored to characteristics of manufacturers in this industry.

3.2 KPI Development

The process of research and development on green evaluation KPIs took 6 months (June - November, 2016) and surveyed 300+ companies in China. Based on TSC's original KPI and China's actual conditions, 18 questions are selected as key indicators for reviewing suppliers' green performance in four aspects: raw material, environmental behavior, workers' health and safety, and green supply chain management. These 18 questions cover from the major pollutant discharge to selection of product material, to design, parts purchase, and to manufacturing, packing, and recycling.

3.3 Establishment of the IT Platform (GPT)

The Green Procurement Evaluation IT Platform (link: <http://gpt.apecreg.org/>) was put into trial operation at the end of 2016 after a three-month co-development by TGCC and TSC. (September - November, 2016) The platform totally meets its expectations: suppliers filling in green performance online, purchasers query supplier performance on their own and screen for eligible suppliers based on scores. APEC Cooperation Network on Green Supply Chain (GSCNET) members, Tianjin Pilot Center, Good Environmental Choice Australia (GECA) and Korea Environmental Industry & Technology Institute (KEITI), and cooperative partner Vietnam CEL Consulting have provided valuable input for the platform construction.

During the process, the other two GSCNET members, GECA and KEITI, and Vietnam CEL Consulting provided instrumental advices. KEITI provided comments on KPIs and usage of the tool in combination with enterprise environment

performance evaluation method in Korea's green finance policy and their finance system. GECA, who runs Australia's only independent, non-profit, multi-sector eco-labeling program and embraces practical experiences in product certification and enterprise sustainable development, shared experience and professional advices on the environmental hot spots.

The use of GPT not only reduces R&D cost in sustainability issues for both purchasers and suppliers, but also benefits them in following aspects:

- Purchaser
 - To better understand indicators on sustainability, reduce supply chain management risk.
 - To get an industry overview, select well performed supplier on sustainability
 - To continuous track sustainability performance of supplier and push for improvement
 - To enhance transparency of green supply chain sustainability performance.

- Suppliers
 - To conduct self-evaluation on their product performance on sustainability
 - To get an industry overview, evaluate and identify level of their performance.
 - To improve product sustainability performance as per suggested
 - To promote transparency and recognition of product sustainability performance.

3.4 Workshops

(1) GPT KPI seminar

The GPT KPI seminar was held by TGCC and TSC in Yujiapu Financial District in July 2016. Experts and scholars from industrial associations, major manufacturers and research institutes have gathered together to discuss mainly over product KPIs. After soliciting and summarizing all opinions, the project team modified KPIs.

(2) Green Procurement Experience Sharing on Annual Conference 2016 of GSCNET

On July, the Annual Conference 2017 of GSCNET was held in Tianjin and organized sub-forum for greens supply chain management tool introduction and experience sharing. Representatives from TSC, leading procurement enterprises, green product certification institutes and procurement & bidding service institutions focused on the introduction of green procurement practice and research & development of GPT.

(3) GPT Introduction and Promotion Conference

In October 2016, GPT Introduction and Promotion Conference was held with 30+ industrial representatives and procurement heads from industrial associations like China Federation of Logistics & Purchasing, China Chain Store & Franchise Association, China Timber & Wood Products Distribution Association, and TRAFFIC upon the invitation of TGCC and TSC.

The Project Team briefed on and illustrated basic functions of the tool, and elaborated on the application and promotion methods of GPT. Stakeholders from all fields gained a better knowledge of GPT. Together, they discussed how to better apply and promote GPT in the industry.

(4) Project Discussion by GSCNET members

In April 2017, TGCC, GECA and KEITI have discussed frequently on the design, implementation and phased results of the project via on-site meeting and teleconference. They acknowledged the significance of green procurement management and supplier green performance assessment. Together, they promoted the use and global application of GPT and planned to adapt it to their own conditions. For an in-depth knowledge of suppliers' green management situation, a workshop is to be held with the participation of GSCNET members, Vietnam CEL Consulting and relevant partners.

(5) Exchange and Communication on the Annual Conference and Green Development Forum 2017 of GSCNET

On July 2017, the Annual Conference and Development Forum of GSCNET was held in Beijing, on which the Progress Report on Feasibility Study of Green Procurement Tool was released. Meanwhile the sub forum on Green Supply Chain Management and Supplier Evaluation Mechanism was held with participants from Vietnam, the Philippines, Mexico and Singapore, etc. as well as stakeholders, e.g. bidding procurement agencies, green evaluation authorities, who shared their relevant practice in green procurement and supplier evaluation. GPT evaluation method, application and duplication model are further discussed.

Vietnam and other economies representatives put forward the importance of enhancing public awareness of green procurement, this study is of great value, will help to establish a green evaluation standard for the third party, to carry out green supplier evaluation, to promote green development.

3.5 Demonstration Projects

GPT has been applied in the green procurement bidding of business building in Yujiapu low-carbon demonstration town. By now, six green procurement demonstration projects totaling RMB 4 million have been completed, covering office furniture of all kinds from more than 20 enterprises.

Combination of GPT and green procurement projects obtained positive feedback from both suppliers and purchasers. The success of demonstration projects ensures a smooth promotion in the future.

3.6 Summary of Green Procurement Practice by APEC Member Economies

(1) Australia

In cooperation with ISEAL, GECA is committed to promoting ISO20400, the first global standard on sustainable procurement. This standard adopts the philosophy of whole lifespan procurement, taking into account of the full range of procurement process from material production, delivery, application to treatment, mainly involving 7 key environmental issues. GECA which is a non government organization, along with others including state and local governments, has granted funding for sustainable procurement, and is making effort to find the balance between government, community, economy and environment, in an attempt to realize win-win. GECA proposes the commitment to Positive Procurement Pledge from the enterprises and organizations, and offers support to the organizations in implementing green procurement.

(2) Japan

In the course of promoting green procurement, Japan has taken advantage of comprehensive utilization of a variety of policies and regulations, including promoting Green Procurement Law on Central Government Procurement of Environmental Protection Materials, which proposes that government and relevant organizations shall procure recycled products. In addition, a series of recycled product laws are proposed, e.g. Container and Package Recycling Lay, Home Appliance Recycling Law, Food Recycling Law, Architecture Recycling Law, Automobile Recycling Law, etc. The laws and regulations help perfect the green supply system.

(3) Thailand

Thailand has established PCD (Pollution Control Department) and proposed 21 green tag products. Next step will work on architectural material environmental certification. The current situation is that cost issue has an impact on the procurement of green tag products. In the realm of green supply chain management, the enterprises' performance on finance, value and environment are evaluated by setting up KPI, and green production is encouraged. Currently Thailand has been promoting green public procurement, including paper, photocopy machine, printer cartridge, etc. and is planning to promote green procurement to other realms. The practice of Thailand has established the guideline and voluntary implementation model. However, the principles need to be standardized and the scale of green procurement shall be expanded.

The above-mentioned APEC member economies have carried out green procurement practice to a certain extent. They have make exploration and promotion of green procurement in terms of the legal framework and policies, green tag of products, public procurement projects, etc. They have also actively participated in the research project and contributed international practice experience to the further perfection and promotion of GPT.

3.7 Summary of achievements

GPT has been gradually localized in China and recognized by industrial associations, regions, purchasers and suppliers during its trial operation. Upon the invitation of many purchasers, a series of demonstration projects have been implemented with favorable operations. We take into account the development of China's local enterprise in setting KPIs. Habits of different economies have been studied in designing the use pattern and page functions. Overall, GPT is an open, diversified platform tool, which can be referenced by other fields and industries in Asia Pacific for green supply chain management.

This project is the first research project that jointly developed by GSCNET members and related stakeholders, which has important significance to the promotion and application of green supply chain in the Asia Pacific region.

IV. The next steps for the project

1. The Program Evaluation Report will be completed by the end of October.
2. To hold a workshop for the project together with GSCNET members and Vietnam CEL Consulting to discuss the research report and how to further improve the platform and promote its application on August 24, Ho Chi Minh city, Vietnam.
3. To submit the the final version of the research report to all the APEC economies by APEC representative of Committee of Trade and Investment of China.

4. To enhance understanding, capacity building, application and collaboration of the GPT tools and platform.