

IMPACT SHEET • SWITCH-ASIA PROJECT
**ENVIRONMENTAL DECLARATION SCHEME FOR
CONSTRUCTION AND BUILDING MATERIALS (SUBUMA)**

Promoting sustainable building materials through carbon footprint labelling in Malaysia



The project created the recognition and preference for sustainable products from SMEs in the construction and building materials sector



The Challenge

Over the last two decades, Malaysia has experienced a high rate of infrastructure development that is expected to maintain momentum through the Economic Transformation Programme (ETP), the Regional Economic Corridors and rapid urbanisation. At the Copenhagen Climate Change Conference (COP) 15, the Prime Minister of Malaysia made a voluntary commitment of 40% greenhouse gas (GHG) emission intensity reduction relative to GDP by 2020, measured against 2005. The construction sector, including manufacturers of building materials and services, can contribute to this aspiration. The trend for sustainable products will impact building materials manufacturers as green building developers include environmental considerations in procurement decisions and supplier management. This clearly represents both a real opportunity and significant risk for Malaysian SMEs who constitute a considerable percentage of the construction and building materials industry.

Objective

The overall goal of the project *Sustainable Building Materials (SuBuMa)* was to drive continued improvement in the sustainable production, manufacture and use of construction and building materials within Malaysia and the export market, through three specific objectives:

- producing guidelines, tools and supporting mechanisms for product footprinting and labelling that met market needs;
- creating the recognition and preference for sustainable building materials and products in the construction industry;
- catalysing continued improvements in the sustainability and economic performance of SMEs in the supply chain of the construction and building materials sector.



TARGET GROUPS

- Construction and building material manufacturers, including SMEs
- Construction industry and property developers
- Policy makers (Government)
- Financial institutions
- Certification bodies
- Industry and professional associations
- Research and development institutes
- Consumers (purchasers of buildings)

Activities / Strategy



Designing and Piloting a Scheme for the Certification and Labelling of Construction and Building Materials

Capacity building programmes on Life Cycle Assessment (LCA), environmental labels, carbon footprint, and eco-profiles for stakeholders involved in the scheme (owners, operators, manufacturers, and professionals) were developed. Some 50 companies were selected to receive technical support, including funding for some SMEs to prepare their facilities and personnel to produce products that were ready for certification/verification. Thirty companies actively participated in the project, of which 13 have received certifications to bear the carbon footprint label on specific product range. A major challenge of the pilot programme was how to quantify the GHG emissions of a product based on life cycle concept; capacity building was needed not only for the industry, but also for the auditors/verifiers as service providers.



Promotion of the Scheme using Case Studies from the Pilot Programme

The carbon footprint labelling scheme and certified products were promoted via dissemination of success stories and case studies at seminars, workshops and exhibitions, as well as through a video, online Carbon Builder game, digital advertising and t-shirts. Due to the currently uncertain market, both locally and globally, it was difficult to motivate companies to invest time, finance or manpower in environmental performance initiatives. However, the project platform, support systems and competencies are ready to provide the companies, in particular SMEs, the access to have their products differentiated in a competitive market, including market expansion.



Development of a Mechanism for Long-term Sustainability of the Environmental Declaration Scheme

The establishment of capacities to sustain an environmental declaration scheme on its own is insufficient; market demand must be created that can come about only through policies and better-informed consumers. The established carbon footprint labelling certification scheme will continue, and be aligned to support national initiatives, such as the GHG reduction commitment made at the Conference of Parties (COP) 21, MyCREST (Malaysian Carbon Reduction and Environmental Sustainability Tool) that evaluates sustainability of buildings over the life cycle by the Construction Industry Development Board, as well as a government-initiated programme to increase SME productivity through efficient production and market expansion.

Scaling-up Strategy



Extending Project Activities beyond the 50 Target Companies

The target organisations for dissemination of project outputs, in particular the environmental labelling scheme, were the Small and Medium Enterprise Corporation (SMECorp) Malaysia. SMECorp is an agency responsible for formulation of overall policies and strategies for SMEs and coordinates SME programmes across all related ministries and agencies. It is also the central point of reference for information and advisory services for all SMEs in Malaysia. The project leveraged SMECorp as the dissemination channel to facilitate adoption of SCP practice among SMEs in all sectors, including proposing policies that incentivised SMEs to change or invest in order to achieve certification for improved environmental performance.



Continuity of the Carbon Footprint Labelling Scheme

To ensure an interest from the market in continuing the carbon footprint labelling scheme, more products within the construction materials sector had to be included. Additional inputs came from those responsible for developing the scheme, writers of product category rules, verifiers and SMEs who sought to obtain product labelling. Manufacturers in the construction materials sector were also able to expand their list of verified/certified products for the market.



Inclusion of Other Environmental Impacts and Extension to Other Sectors

The project prepared the environmental declaration scheme framework for a future expansion to cover other environmental impacts, such as water consumption, resource efficiency, waste management, etc. The scheme developed for the construction and building materials sector can be replicated for auxiliary sectors in their supply/value chains. It is also applicable to other key sectors, such as electrical and electronic, chemical industry, agriculture and service sectors, such as ICT and contracting services.



Lightweight clay aggregates



A test run of footprinting toolkit



Engagement sessions with manufacturers



The SWITCH-Asia Programme is instrumental in providing organisations in Asia with the opportunity to forge exploratory partnerships with European entities during the project period, with the potential of being translated into long-term synergetic business partnerships which would not have occurred without the relevant funding and linkages make available under the Programme.



Dr. Chen Sau Soon,
Project Manager, SIRIM



Results



Increased Adoption of International Best Practice and Technology by Companies

The carbon footprint labelling scheme was developed based on international standards, such as the ISO series of standards on environmental management, GHG protocol of the World Resources Institute, and PAS 2050 guidelines on carbon footprinting, ensuring global market acceptance. The project enabled 30 local participating companies to adopt best practice to remain competitive, especially when they realise their competitors have declared verified results.



Supported and Encouraged the Procurement of Sustainable Products

Some 50 companies initially expressed interest in participating in the carbon footprint labelling pilot, with 13 companies having managed to meet all the requirements of the audit process and received the license to use the SIRIM carbon footprint logo by the project's end. Another 17 companies were in the process of acquiring the certification. The availability of carbon footprint labelled products should contribute to hastening the introduction of the Government's Green Procurement Programme. However, building materials have yet to be included in the green product list of the government pilot programme on green procurement. The Public Works Department has started recognising materials and products with environmental performance declared, within tenders for public buildings.



A Carbon Footprint Labelling Scheme that Meets the Needs of Local and International Businesses

The Carbon Trust, in providing input to the development of the environmental declaration scheme and training personnel responsible for developing and operating the scheme, ensured recognition and acceptance. Through this product carbon footprint scheme, SIRIM was able to join the Asian Carbon Footprint Network, and also participated in a Carbon Trust project to explore how the various carbon footprint schemes in the Asian region could be harmonised and synergised.



Continued Improvement in the Environmental Performance of Construction and Building Materials Produced in Malaysia

The ten product categories identified for the pilot programme, namely wall coatings, sanitaryware, plumbing pipes, ceiling ceramic tiles, floor finishings, wall panels, masonry units, structural steel, architectural steel and architectural roofing, will provide impetus to other manufacturers to improve their environmental performance. To increase the demand for carbon foot-printed building materials and products in the local market, supporting policies are required to create a market pull.



The ability to develop product category rules that describe the measurement and labelling of the greenhouse gas emission of a product over its life cycle is a new capability in the country, as is the third party verification capacity. The existence of a credible carbon footprint labelling scheme is set to motivate or create the competitive spirit of companies in the same business area to excel, or at least to keep on par with their competitors.



*Dr. Ang Show Hing,
Hume Cemboard
(a fibre cement producer)*



The factory of a participating SME



Flooring materials

Impact in Numbers

<p>Economic Impact</p> 	<ul style="list-style-type: none"> • 30 local participating companies adopted international best practice to remain competitive. • Through the participation of 50 companies, at least 10 carbon footprint labelled products were launched in the Malaysian market, from none prior to the project's intervention. • Additional business opportunities were identified, such as training and consulting services, energy efficient systems and gadgets, and expanded fields of audit through the carbon footprint certification and labelling scheme. • The carbon footprint measurement will either cover cradle-to-grave or cradle-to-gate. Its impact on supply chains will depend on the requests from suppliers for materials/components with smaller footprints. 	<p>Target Group Engagement</p> 	<ul style="list-style-type: none"> • SMEs were engaged in three forums on selection of product categories and one SME Engagement and Awareness-Raising Session on Carbon Footprint Labelling. Together with four outreach activities, some 200 SME companies were engaged on the topic of product environmental performance and carbon footprint, out of which 49 signed up and 30 went through the certification process. • The project engaged with business associations, media and the certification body SIRIM QAS International Sdn Bhd, through technical training sessions and technical committee evaluation of the project output, e.g. product category rules.
<p>Environmental Impact</p> 	<ul style="list-style-type: none"> • The project introduced SCP measures such as life cycle approach and environmental labelling / declarations to Malaysia's building and construction sector. • SMEs learned to implement measures such as carbon management and cleaner production to address climate change and resource scarcity issues. 	<p>Policy Development</p> 	<ul style="list-style-type: none"> • The project contributed to the green technology and climate change national policies favouring lower carbon emissions, energy and resource efficiency. • Through the project, the Public Works Department started recognising materials and products that have declared environmental performance within tenders for public buildings. • The project leveraged SMECorp, under the Ministry of International Trade and Industry, as the dissemination channel to facilitate adoption of SCP practice among SMEs in all sectors.
<p>Climate Benefits</p> 	<ul style="list-style-type: none"> • The project increased awareness of climate change issues (anthropogenic GHG emission and their risk to businesses) among the SMEs through project activities, e.g. measuring carbon footprint of building material products. • Carbon footprint labelling will motivate manufacturers to address 'carbon hot spots' in their products to reduce the declared values, especially if competitors have lower values. 	<p>Europe-Asia Cooperation</p> 	<ul style="list-style-type: none"> • One new EU-Asia partnership was initiated with the UK Carbon Trust. Knowledge transfer was organised and carried out by the Carbon Trust on carbon footprinting assessments and tools, certification and environmental declaration schemes.
<p>Green Finance</p> 	<ul style="list-style-type: none"> • Stakeholder workshops and engagement sessions for the purpose of recruiting pilot programme companies have enabled communication with financial institutions. 		



Legend

- Eligible countries for the SWITCH-Asia Programme
- Non-eligible Asian countries for the SWITCH-Asia Programme

Project implementation area

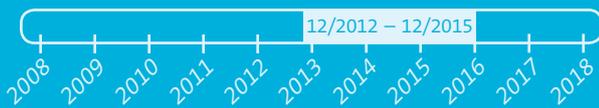
- City
- Region
- Country

The boundaries shown on this map do not imply on the part of the European Union any judgment on the legal status of any territory or the endorsement or acceptance of such boundaries.

OBJECTIVES

The SWITCH-Asia project *Environmental Declaration Scheme for Construction and Building Materials* aimed at developing guidelines, tools and supporting mechanisms for product footprinting and labelling to meet the needs of local and international markets, and created the recognition and preference for sustainable products from companies, including SMEs, in the Malaysian construction and building materials sector.

DURATION



PROJECT TOTAL BUDGET

EUR 2 043 000
(EU contribution: 80%)

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