

## **Sustainable Development Report 2015** **Siam City Cement Public Company Limited**

**Bright Sustainable Future**





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Sustainable Development Report 2015



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A photograph of a group of children in a lush, green forest. In the foreground, a child in a pink backpack stands in shallow, brownish water. Behind them, two more children walk along a sandy bank. The background is filled with dense green foliage and large bamboo leaves.

**BRIGHT  
SUSTAINABLE  
FUTURE**



## Executives' Foreword

The year 2015 was an auspicious one for Thailand as Her Royal Highness Princess Maha Chakri Sirindhorn celebrated her 60th birthday anniversary. Siam City Cement Public Company Limited participated in this national celebration by building the Border Patrol Police Learning Center Cha-Lerm-Pra-Kiet, which is located in Baan Nam Bor Sapeh, Pang Mapha District, Mae Hong Son Province. This learning center provides much needed education to underprivileged children in this remote part of Thailand under our Integrated Green School concept. The learning center is not only a quality educational institution but also a place where children can learn about environmental conservation, organic farming, and the proper use of water and energy resources. Since 2010, the company has been collaborating with the Border Patrol Police in the construction and renovation of buildings at 29 schools in remote areas as part of the Green School project.

In 2015, Thailand suffered its worst drought in decades. Farmland and paddy fields in various areas were damaged by a shortage of water. SCCC promptly offered urgent assistance by pumping out water from the company's sand pits in Ayutthaya and Anghong Provinces to help over 236 affected farming households in neighboring areas with more than 5,000 rai of farmland. This demonstrates our commitment toward corporate social responsibility, particularly during times when communities and society are in trouble.

For our exceptional role in the promotion of energy conservation and alternative energy, we have been recognized by the Ministry of Energy with three prizes

at Thailand Energy Awards 2015. We were also selected to represent Thailand at the ASEAN Energy Awards 2015, where we were honored with another three prizes. These prizes have brought a sense of pride to SCCC and to Thailand, reflecting how top organizations in Thailand have become regional leaders in energy management and conservation.

Our sustainable development roadmap, launched in 2010, emphasizes six key areas in which we aim to offer added value to all stakeholders and to benefit the environment and society in general. In 2015, we realized that the outcome of some of these efforts have not yet matched our expectations, such as the reduction of carbon dioxide emissions and waste from the concrete business. The main reasons that results have been less than what we hoped for stem from external factors, which have only inspired us to further rise to the challenges. We remain determined to achieve our plans and to continue to encourage the participation of all parties.

In October 2015, we were accepted as a member of the Cement Sustainability Initiative (CSI), which is an internationally recognized, voluntary alliance of major global cement producers who are dedicated to developing and steering their operations toward the highest standards of sustainability, while engaging in a process of continuous innovation.

We wish to express our gratitude to all those who have supported and contributed to the progress of our sustainability projects, which have been developed for the betterment of the environment and the society for generations to come.



**Mr. Paul Heinz Hugentobler**  
Vice Chairman of the Board of Directors



**Mr. Vorathep Rangchaikul**  
Director & CEO

# Sustainable Development Roadmap & Steps Towards International Standards of CSI 2015



Since 2010, Siam City Cement Public Company Limited's Sustainable Development (SD) Roadmap has emphasized six key areas that we believe will create shared value for all stakeholders in the name of both the environment and society. While this plan has enjoyed significant progress in past years,

its implementation in 2015 has been more gradual than planned. There are several reasons for this. First, we continue to adjust our major operations under the 3Rs principle, which has resulted in increasingly tougher challenges to the implementation of our plan. In addition, the broader economic slowdown in Thailand has forced SCCC to recalibrate its business strategies to overcome these challenging circumstances in a way that both maintains a balance between the 3 SD pillars (from economic to environmental and social) and allows us to continue to benefit all parties.

However, SCCC remains committed to the six long-term goals through the participation of all relevant parties and a continuous process of innovation in terms of SD management. In 2015, we took the important step of committing to achieve an international-standard-level of sustainable development, which has earned us membership in the Cement Sustainability Initiative (CSI) –an alliance of 26 leading global cement producers who pursue cooperation in the name of driving their business operations towards global standards of sustainability in various areas. CSI has been recognized by the global community

-  CO<sub>2</sub> Emission Reduction
-  Stakeholders Engagement with Green Heart Activities
-  Community Involvement & Development
-  Zero Waste to Landfill
-  Green Product & Service Innovation
-  Water Conservation

and helped add value to business, the environment and society (Details of CSI can be found at the end of this report).

## Summary of the Performance and Highlights of SCCC Group's Company SD Roadmap in 2015



### CO<sub>2</sub> Emission Reduction

We recorded CO<sub>2</sub> emissions of 699 kilograms per ton-cement in 2015. This figure was higher than our expectations mainly owing to uncontrollable external factors that impacted key variables crucial to the reduction of CO<sub>2</sub> emissions, such as the below-target utilization of alternative fuel (% TSR). Higher competition in the procurement of waste and lower coal prices were two factors that made it more difficult for us to achieve our desired economic value related to the management of alternative energy. Moreover, the percentage of clinker factor was also higher than planned as a result of the continued growth in demand for OPC cement in all markets. In summary, when compared with our CO<sub>2</sub> emission base in 2007, we have cut down our CO<sub>2</sub> emissions by 51 kilogram per ton-cement, or 6.8 percent, which remains below our expectations owing to the aforementioned factors. (Our goal is to reduce CO<sub>2</sub> emissions by 20 percent in 2020, when compared to 2007, or to lower our CO<sub>2</sub> emissions to 600 kilograms per ton-cement from 750 kilograms per ton-cement.)



## Stakeholders Engagement with Green Heart Activities

Under the “**Green Heart**” concept, since 2010, SCCC has initiated a campaign to promote environmental preservation awareness among all our stakeholders. All of the company’s departments and divisions have been working hard on this campaign with our employees, customers, concerned communities, suppliers and distributors. This endeavor has earned SCCC widespread recognition and success, and in 2014 made us the first cement producer to be presented with the Green Industry Level 5 –the highest award from the Ministry of Industry –in honor of our **introduction of the Green Network**. In 2015, we continued to provide support to the **Green Network**, which has not only strengthened the bond between the company and all stakeholders, but also enhanced the reputation of INSEE cement as a leader in sustainable environmental management. We have invited all interested individuals from both the public and the private sector to visit our facilities and exchange knowledge regarding our green industrial standard management practices, which have earned us praise on various occasions.



## Community Involvement & Development

At present, every production unit of the Group Company continues to pursue the annual Community Involvement & Development plan to promote cordial relations with local communities, in accordance with the company’s mandate to maintain close engagement with them by both participating and supporting activities that will help promote sustainable development. Our endeavors have been consistently well-received and praised. SCCC recognizes the importance of social responsibility in our business and has initiated the **CSR-In process**, which involves the prevention and the mitigation of environmental impacts from our business operations, and includes projects aimed at the reduction of

CO2 emissions and water conservation. We have also launched the **CSR-After process** initiative, which provides support to activities focused on the sustainable development of local communities, such as educational or environmental ones and infrastructure development.

Outstanding CSR programs in 2015 were the **“Nam Jaak Bor Sai INSEE”** or **“Water from INSEE Sand Pit Project,”** which was launched to help over 236 farming households that were facing drought in their more than 5,000 rai of farmland in several villages of Ayutthaya and Angthong Provinces, and the ongoing Green School Project, which since 2010 has seen the construction of school buildings at over 29 schools along the border area. In 2015, SCCC also constructed a **Green School at Baan Pa-Ker-Yor**, a remote village in Kaeng Krachan District of Phetchaburi Province.



## Zero Waste to Landfill & Utilization of Alternative Fuels

SCCC has achieved the Zero Waste to Landfill target at its Saraburi operations, Conwood plant and INSEE Aggregates since 2011. Currently, we are continuing to move towards the same target at our ready-mixed concrete plants, after having failed to do so in 2015 as initially planned. The deadline for this plan has accordingly been extended to 2018. The reason the extension was necessary is due to external factors, namely that targeted customers have ordered ready-mixed concrete in excess to facilitate their businesses. As a result, there was more returned residual concrete than the company anticipated. Nevertheless, the INSEE concrete team has conducted a study on the recycling of returned concrete to retrieve gravel and sand for reuse. This study should not only help reduce waste and benefit the environment, but also help lower our production costs. We plan to start the installation of the Recycling Aggregate machine at our production facilities from the beginning of 2016 as we believe that this is a sustainable approach to handle waste and benefit



everyone. In summary, from 2010 to 2015, our concrete business has managed to reduce production waste by 41.9 percent, or from 2.89 percent of production in 2010 to only 1.68 percent in 2015.

In addition, our management team has recognized the importance of the efficient disposal of waste as well as used materials in order to help alleviate their environmental impact. One suitable solution has been the use of alternative fuel in the production of cement. SCCC has set up a challenging long-term target on the Thermal Substitution Rate by at least 25 percent by the year 2020. In 2015, our utilization of alternative fuel (%TSR) was at 10 percent, which is lower than we had planned due to various factors, particularly those external influences. And this continues to be a challenge for us to overcome in the interest of all parties.



### Green Heart Products & Services Innovation

The Group Company continues its focus on the development of products and services that are environmentally friendly. In 2015, we introduced three new eco-friendly products which have warranted our **Green Heart Label**

1. **Portland Composite Cement (PCC)**
2. **Cellular Lightweight Concrete (CLC) and**
3. **High Strength Concrete with 550-ksc. compressive strength**

In 2015, SCCC's sales of these products accounted for 30% of total sales, up from 27.5 percent in 2014. This record suggests a level of progress that remains well below our expectation of 40 percent of total sales by 2017. The main cause remains external – the continued growth of OPC cement in all markets.

Nevertheless, SCCC is determined to develop more environmentally friendly products and services while actively cooperating with various networks and outside agencies in promoting the consumption of such products in order to cater to the demand of our customers and "Green" buildings.



### Water Management & Conservation

Water is an increasingly important natural resource, both for society and for our business. SCCC has set an ambitious Water Management & Conservation target that covers all SCCC Group Company units, including our Saraburi operations, the Conwood plant, and Siam City Concrete Company Limited, in order to reduce water usage by at least 20 percent by 2017 – based on the 2012 figures – through the **"Reduce, Reuse, and Recycle"** concept. To date, the progress has been as expected. In 2015, we recorded a 14.5 percent reduction in water usage at our Saraburi operations, where the Zero Water Discharge target has been achieved since 2014. At the Conwood plant, water usage has been reduced by 29.4 percent, which is better than projected. The challenge that remains is at the ready-mixed concrete operations, where the water usage rate has not been reduced due to the adoption of the water spray policy to minimize the impact of dust on surrounding communities. As a result, finding a new and effective water conservation method remains a challenging task for us there.

## A Banner Year for OH&S

Best safety performance ever achieved



**Prasert Kasikigkulpol, Group OH&S Manager was all smiles when he was asked how Siam City Cement Public Company Limited's performed in the field of occupational health and safety (OH&S) in 2015.**

He pointed to the graph on the projector's screen which showed the lines representing fatality arising from operations, lost time injury frequency rate (LTIFR) and total injury frequency rate (TIFR), all safety indicators, falling sharply from the recent years.

There was a good cause for celebration for SCCC at the helm of Mr. Prasert as 2015 stood out as the **"Best Year Ever"** for overall safety performance, not only from the perspective of SCCC employees, but contractors and outside parties serving the group.

To sum up, there was zero fatality in 2015, compared to two in 2014 and three in 2013.

LTIFR, measured by the numbers of work stoppage on every one million man hours, was at 0.27, down from 0.37 in 2014 though was marginally higher than the 0.25 rate in 2013. In terms of TIFR, the 2015 record was at 1.96, falling from 2.28 in 2014 and 2.42 in 2013.

A key area that made significant headway in the year was the decline in road accidents, which normally represented the bulk of all accidents taking place each year within SCCC's operation environment.



There were 108 road accidents in 2015 versus 134 in 2014, 182 in 2013 and 245 in 2012 which was the base year when official figures were made available.

The year's impressive records stemmed directly from intensified safety culture and practice which underscores SCCC's leadership in fostering safe and healthy workplace in Thailand.

"The 2015 performance results did not come easy as all stakeholders have worked particularly hard and passionately to constantly challenge themselves in breaking records," said the bespectacled executive, adding "we should congratulate them for a job well done."

But he cautioned that SCCC along with other stakeholders must not rest on their laurels but to strive to achieve the ultimate goal of seeing its entire works causing **"zero harm to people."**

However, realistically, the group's next milestone is to strike **"zero accident,"** reflecting SCCC's belief that all fatalities, injuries and work-related illness can and must be prevented within its operating environment.

"Zero harm to people is a long and rocky journey we have to take, but if we challenge ourselves with passion and hard work we would get to the point where we wanted to be," he said.

The year 2015 saw SCCC and its stakeholders invest substantially in time, resources and money to improving OH&S performance.



Passion for Safety

## SCCC Group Company strongly determine to comply with 5Do 2Don't

### 5Do...

- Fitness for Work
- Vechicle and Traffic Safety
- Personal Protective Equipment

### 2Don't!

- Safety Provisions
- No Alcohol nor Drugs

## Diverse & Extensive Safe-Centric Programs

The list of undertakings at diverse workplaces within SCCC's sphere in 2015 was exhaustive, taking up to some ten pages in an executive summary prepared by Mr. Prasert's team.

Several of them was a work in progress from the previous year but there were good numbers representing new OH&S initiatives put forward in 2015 by SCCC's 20 functions.

Taken onboard during the period were a total of 60 initiatives related to four main spectrums—road accident prevention, prevention of accidents resulting from working at height, prevention of accidents arising from machines with rotary systems by installing machine guarding and workplace improvement.

Developing OH&S competency among all levels of SCCC employees mostly through intensive training have continued unabated for the fourth year with over 400 people taking part.

Furthermore, a total of 155 SCCC employees, who mostly involve in marketing function and driving a lot (2,200 kms a month), were put into advanced driving course to improve their motoring skills conducted by a government certified driving school.

An INSEE OH&S performance ranking was introduced in the year to provide a universal comparison of standings through a systematic auditing.

Essentially, the rankings, with four levels of grading (A,B,C and D), served as a catalyst leading to OH&S improvement at each individual functions.

Meanwhile, a total of 148 OH&S internal audits covering 92 SCCC work sites as far as Chiang Mai to

the North and Phuket to the South were carried out during the year to ensure that they were fully compliant with the Group's standard yardstick.

One of the stringent new initiatives launched in the year was a compulsory alcohol check among all the truck drivers responsible for cement and concrete deliveries, a step up from a random basis applied earlier.

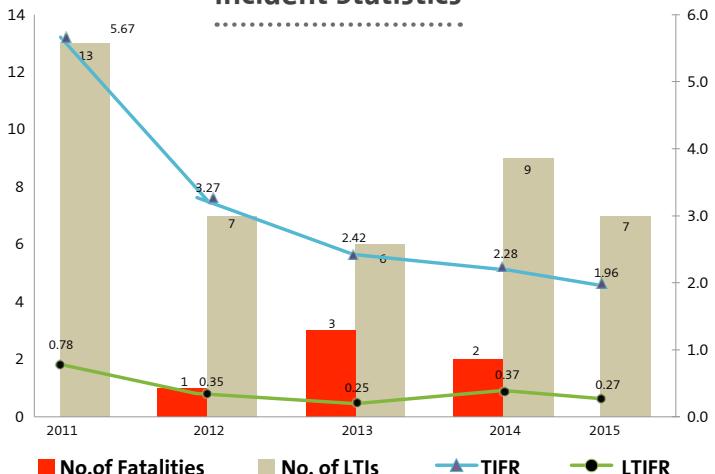
Complementing the safety feature for truckers was the introduction of an early warning system, through the GPS installed in the vehicles, to alert them of accident-prone spots on the routes before reaching such locations.

At Conwood's Saraburi plant, the 20-km speed limiters were installed in forklifts as an accident preventive measure.

The year saw the heightened implementation of the **“Five DOs and Two DON'Ts”** under the SCCC's safety cardinal rules across the SCCC employees, all external parties serving the Company as well as visitors.

The compliance to the cardinal rules is among the first important steps which go a long way to allow SCCC to achieve its **“zero harm to people”** mission.

### Incident Statistics



# The Journey to Safety Excellence

Safety Garden set up to intensify SCCC's safety culture



**Even though the Company has had a proven track-record of workplace safety, it remains a top priority to strike a new record to make its operation “zero harm to people.”**

The mission to excellence in occupational health and safety (OH&S) gave birth to an academy at SCCC's Saraburi facility to provide practical training on proper handling of tools equipment, machineries and others to its workers to stay safe.

The “**Safety Garden**” is an innovation of learning facilities, opened in June 2015 dedicated to develop mindset and skills to succeed the safety mission.

The word garden was made as suffix to the academy's name to reflect its outdoor setting in a green environment conducive to easy and hand-on learning of safety.

Ten stations with demonstration units were set up for participants to learn the right way to handle all hazardous working activities and how to prevent accidents, aided by parts taken from actual workplaces and guided by the Company's own experts through simulated situations.

These safety stations cover virtually all aspects of subjects and situations involving actual operations where accidents may occur.

Each station has a specific teaching task related to: lifting and supporting load; personal protective equipment; electrical safety; isolation and lockout & machine guarding; hot work and fire life safety; hot materials & gases; confined space; digging and excavation & quarry slope and stability; working at heights; vehicle and traffic safety.

However, the teaching and aspiring safety among SCCC employees rendered at the Safety Garden is nothing

new for the Group, cautioned Chawin Chaitaimwong, Manager at SCCC's Occupational Health, Safety and Security Department.

*“The safety passion has been with us for over a decade and only that the Safety Garden's creation serves as an effective new tool to achieve excellence.”*

*Chawin Chaitaimwong*

*Manager at SCCC's Occupational Health, Safety and Security Department.*

“The safety passion has been with us for over a decade and only that the Safety Garden's creation serves as an effective new tool to achieve excellence” he said.

But the most outstanding feature of the academy lies in its ability to customize training sessions to gain the deeper understanding of the participants in order to reflect real-life operational surroundings.

SCCC's entire workforce of 1,593 people have successfully passed the safety training course at the Safety Garden academy under the “awareness” level in 26 sessions which each comprising 8-15 members (for each stations rotating in one day training.)

There is a strong contingency of ten-plus instructors at the academy are SCCC's own staff who underwent intensive trainings for best practice provided by leading external institutes in their respective fields.

For the next step, a health and physical fitness facility will be integrated as part of the academy which in itself will be finally upgraded with “smart” learning process featuring for interactive IT system.

## SCCC's Green Industry Journey moves forward

Quarry and mortar works set for GI-4 certificates



Siam City Cement Group Company endeavour to have the entire spectrum of supply chain accredited with the coveted title of "Green Industry," or GI, continued unabated in 2015.

Two of SCCC's other operations, one involving quarry and the other mortar, went through an auditing by the Industry Ministry for the GI-4 certificates which were expected to be issued in 2016.

The GI-4 (Green Culture) recognises an enterprise for having ingrained the environmental culture within its scope of operation.

The pending GI-4 certifications for the two units would further the Group's Green Industry journey which saw the group climbing up the ladder of the ministry's 5-level Green Industry certification which made a debut in 2011 to encourage industries to go green.

SCCC made a headline in July 2014 by becoming Thailand's first cement producer to win the coveted GI-5 certificate for thoroughly embracing green practice at its three plants in Saraburi.

GI-5 underscores the apex the Company has reached in its eco-friendly commitments under the Ministry's definition which are well beyond industry yardsticks.

More precisely, the GI-5 endorses Saraburi's attempt in inducing entities in its entire spectrum of supply chain—business counterparts and partners—to adopt green practice at least on the entry level of GI certification, and being accepted by communities around their workplace.

Actively sharing SCCC's best practice from the GI perspective with suppliers and external parties was given a top priority in the year to broaden the green network in Thailand.

Meanwhile, SCCC Group Company welcomed more than 300 people from various parties as well as SCCC shareholders in different periods of the year to learn and experience SCCC's GI-5 achievement.

External parties including a group from the Federation of Thai Industries have perceived SCCC as a role model as a Green Industry and made visits to SCCC's Saraburi works to see for themselves what it takes to earn the GI-5 accreditation.

"GI mission is a work in progress at SCCC, requiring to be relentless in continuing with what we have achieved and taking on new challenges," Sawitri Phatayanon, Manager of Environment Controlling and Developing Division, concluded.



## SCCC Scoops Six Energy Awards

Largest single recipient of 2015 Thailand & ASEAN Energy prizes



**Six was the number of prestigious awards Siam City Cement Group Company has scooped from the Thai Energy Ministry and ASEAN for its remarkable pursuit of energy conservation and alternative energy development.**

Winning both the 2015 editions of Thailand Energy Awards and ASEAN Energy Awards 2015 were the Group's three undertakings which underlined its drive towards sustainability in which energy is one of the six key elements.

SCCC's innovation in using sludge from industries as alternative fuel in cement kiln was granted the top accolade in the contest organised by ASEAN Centre for Energy (ACE) and Department of Alternative Energy Development and Efficiency (DAEDE) under the Thai ministry.

The group's utilisation of residue-derived fuel for co-processing in cement kilns earned SCCC an "Outstanding" award from DAEDE as well as the "First Runner" prize from ACE.

**SCCC's Suan Ming Monkol or INSEE Green Park** was the proud recipient of ACE's "Winner" and DAEDE's "Outstanding" awards in the category of creative energy conservation buildings (Tropical Building).

Scooping six awards in one year was considered an achievement in terms of prize numbers for a business enterprise in Thailand, said Amornsak Torot, SCCC Vice President for Saraburi operation.

"Winning Thai Energy Awards Thailand 2015 was the first achievement in local stage that opened the door for a greater honour on the regional (ASEAN) scale," he pointed out.

Nomination the annual ASEAN Energy Awards was made by DAEDE from the list of local undertakings which were hand-picked earlier for Thailand Energy Awards in five different categories.

### A Pioneer in Alternative Fuel

SCCC was the pioneer in the Kingdom's cement industry in using sludge, the mostly toxic waste derived from industries involving petroleum, petrochemical, paint and electronic, as a alternative fuel in cement kilns in a safe and environmentally-friendly manner. In 2014, the period whose data was used for the energy Awards selections, SCCC consumed 15,897 tonnes of sludge, which was properly treated and directed to kilns, for cement production to replace 9,885 tonnes of lignite which would otherwise been used.

That volume of lignite substitution contributed to 13,839 tonnes in green house gases which would be created while helping to tackle the issue of landfill the sludge.

Using industrial and communal wastes such as plastic, beverage cartons and contaminated cloth, which are correctly processed and feeding into SCCC's cement kilns, offers greater extent of benefits as fuel replacement.

A total of 137,312 tonnes of these refuse were sent to the kilns in 2014, translating into 151,930 tonnes of lignite which were substituted.

### A Long History of Alternative Energy

Developing alternative energy has indeed been a key mission at SCCC since 2001 when a waste management service unit, then known as Geocycle, was created to turn industrial and public discard into useful energy.

Such operation was given a major boost in 2008 with a 700-million-Baht investment was made for the upgrading the Saraburi's plant and for establishing a second facility in Chon Buri.

The SCCC's waste management subsidiary, now renamed as **INSEE Ecocycle**, has been instrumental in fulfilling the Group's waste-to-energy policy which also has an added benefit of cost saving for its cement production.



The percentage of alternative energy to total fuel consumption at SCCC, measured in thermal substitution rate (TSR), has gradually risen from 3.5 percent in 2007 to 10.0 percent in 2015.

SCCC was committed to achieve a 25 percent TSR in 2020 and that target will require the Group to continue to challenge itself and investing heavily, to the tune of 137 million Baht over the next four years, for new technologies and facilities.

*"If you look around at least in the Thai cement industry sector, you may see clearly that SCCC has the most active alternative energy development and energy conservation programme—something which we are proud of."*

**Amornsak Torot**  
SCCC Vice President for Saraburi operation

"If you look around at least in the Thai cement industry sector, you may see clearly that SCCC has the most active alternative energy development and energy conservation programme—something which we are proud of," said Mr. Amornsak.

### A Strong Candidate for 2016 Awards

SCCC has lined up seven more creative undertakings for nomination of 2016 editions of Thailand and ASEAN Energy Awards.

Among them are another alternative fuel in cement kilns; the recycling of waste heat for mortar production, cement bag deflector and slider chute; energy conservation at Saraburi plants #1 and #3; an outstanding energy leader; a prominent energy management team, and a solar-powered cloth dryer.

According to Mr. Amornsak, the submission of energy schemes for award contest serves to motivate SCCC staff for best practice and creativity in energy undertakings and let the Group's pursuit of excellence in such field, forming part of its Sustainable Development (SD) philosophy, be known in a wider spectrum.

# Siam City Cement Group Company Advances Low-Carbon Journey

11 more products get labels of approval



**Siam City Cement Group Company list of products imprinted with a hallmark featuring a globe encircled with the word CO<sub>2</sub> and an arrow head, has become longer in 2015.**

The Group Company has gone an extra mile, works twice as hard and challenges the status quo as much, to reduce green house gases involving the production of its products.

A total of 11 products, including five varieties of ready mixed concrete for bulk deliveries, five INSEE Mortar cement brands and INSEE Petch Portland cement, were authorised to carry the carbon footprint label issued by Thailand Greenhouse Gas Management Organisation (TGO), a public entity.

The year's entries brought the total numbers of SCCC products being recognised for contributing to lower their carbon dioxide (CO<sub>2</sub>) emissions during the production process to 17, the largest of its kind by the cement industry in Thailand.

That was a quantum leap from 2014 when SCCC began to be endorsed by TGO with six products being first eligible for carrying the labels.

Since those 17 products represent 70-80 percent of SCCC's production, you can imagine the impact of CO<sub>2</sub> reduction is therefore significant, said Sawitri Phatayananon, Manager of Environment Controlling and Developing Division, concluded.

The scheme seeks to encourage companies on the calculation of GHG emission factors as an indication to cut the emission as well as preparing them for carbon trading scheme.

Those labels allow customers of SCCC products to appreciate the knowledge that those products are helping to mitigate GHG that contributes to the global warming and consumers themselves contribute to such course.

The achievement made in 2015 demonstrates that the company's low carbon journey that began in earnest back 2007 has made steady progress.

SCCC has strived to achieve the self-imposed target to reduce CO<sub>2</sub> emission from its production process by 20 percent from its 2007 level by the year 2020.

In 2015, SCCC's specific net CO<sub>2</sub> emission were cut to 699 kgs per each tonne of production, down by



51 kgs/tonne in 2007, and inching towards the 600 kgs/tonne aimed for in 2020.

The Company is also on course to achieve the objective of having at least 40 percent of its total sales in 2017 coming from products featuring environmental friendly and CO<sub>2</sub> mitigating elements.

In 2015, SCCC has already struck a 30 percent record and that provided a good foundation for striking the 40 percent milestone, she said.

SCCC's endeavour to cut green house gas emission has not been legally required but is driven by a voluntary and deliberated desire to make its operation friendly to the globe.

SCCC's commitment towards cutting CO<sub>2</sub> is considered advanced and echoed a key message from the Paris climate conference (COP21) in December 2015 that the world needs to unite to limit global warming, said Yongyut Sangangam, Manager for Corporate Sustainability Development at SCCC.

It was agreed by 195 nations there that they will attempt to cut GHG emissions to a level that will limit the global average temperature to a rise“

well below” 2°C (3.6°F) compared to pre-industrial levels –a level of warming deemed to be the point when dangerous climate change could threaten life on earth.

“The world is moving into a low-carbon society and we at SCCC are proud for contributing to that journey as we create green values for stakeholders,” he added.

***“The world is moving into a low-carbon society and we at SCCC are proud for contributing to that journey as we create green values for stakeholders.”***

***Yongyut Sangangam***

*Manager for Corporate Sustainability  
Development at SCCC*



# New Identity Ushers in New Era for SCCC's Waste Management Operation

INSEE Ecycle goes live with new vigour

**The Company's waste management business unit has undergone a major evolution to become an entity of its own right as it gears up to offer a wider range of sustainable waste management solutions.**

INSEE Ecycle, the new entity, was built upon the AFR (Alternative Fuel and Raw Materials) unit of SCCC's plant in Saraburi since 2001. In mid of 2015, the Group Company decided to set up an own brand for the waste management business and to transform this business unit into a subsidiary

company. With the exit of the Holcim Group, it was a right time to rebrand the business unit which had now grown into a well respected industrial waste solution provider known as Geocycle. This milestone marks a transition; a fresh start for embarking on a new corporate roadmap which focuses on sustainability and raising the bar of industrial waste management services in Thailand. We aim to be the leader in the sector providing sustainable waste solution for business, INSEE Ecycle CEO, Vincent Aloysius pointed out.

Under the new set-up of INSEE Ecycle, the solid reputation of SCCC's INSEE forms our foundation. Ecycle combines two key words –ecology and recycling –to reflect our core values. The Company will operate as a “stand-alone” enterprise, to shape the focus and aspiration of the unit to pave the way as a leading sustainable waste solution provider in Thailand.

The new organisation will not only process wastes for use as alternative fuel or raw materials for SCCC's cement kilns as has been traditionally the the main goal.

Ecycle will strive to provide comprehensive sustainable waste solutions for Thai industries. It aims to provide sustainable waste solutions. Sustainable waste solutions mean Ecycle will have to look at the needs all along the waste management value chain. This ultimately means that Ecycle has to look at forming partnerships able to deliver these solutions. Acquiring new technical solutions and being pathfinders will be more on waste sustainable provider which able to serve whole chain and partner with customers and stakeholders to deliver a 'peace-of-mind' waste management. “The growth of industrialisation in Thailand has been extraordinary” says Nuchida Rungthawornwong, Ecycle's Senior Manager responsible for Stakeholder Relations and Regulatory Compliance. “However, the infrastructure for modern, professional industrial waste management has not kept abreast with this





industrial development," she adds. INSEE Ecocycle, aims to close this "waste gap" emphasizes Nuchida Runghawornwong.

There are certain types of waste management solutions that are not yet available, or are available in a limited way to industries. There are industries where the processes and operations generate some challenging waste streams. These types of waste streams require highly trained professionals with a high level of safety and environmental management commitment. INSEE Ecocycle, with its experienced and well trained personnel, can fill the needs of companies who have a high emphasis on safety and keeping their environmental footprint to a minimum. Companies who are looking for this "peace of mind" are our ideal sustainability partners, says Chanaporn Thaiwattananont, another Senior Manager at INSEE Ecocycle.

A track record dating back to 2001 and a pool of 100-plus staff who are specialists in their respective fields enable INSEE Ecocycle to service its customers and partners who are equally committed to sustainable development. INSEE Ecocycle cannot rest on its laurels, with the trust earned from some 350 industrial entities in the Kingdom, we need to

continue to seek and provide industry best practices to our partners." We are committed to continue to advance our technical capabilities and the service level to our customers, said Aloysius, the Executive who has clocked more than 20-years of international experience in the cement and industrial waste management fields.



***"We aim to be the leader in the sector providing sustainable waste solution for business."***

***Vincent Aloysius***  
INSEE Ecocycle CEO

The Company's operations have been certified with internationally recognised ISO standards, namely ISO 9001, ISO 14001, OHSAS 18001 and ISO/IEC17025.

# Operating with Integrity

INSEE enhances code of business conduct to underpin good governance commitment



**This newly-issued booklet on the “Code of Business Conduct: Working with Integrity” is far richer in contents than the previous publication with greater clarity featuring DOs and DON’Ts, anecdotes and graphical illustrations which are even more relevant to all stakeholders.**

The edition is a tangible proof of the SCCC Group Company endeavour to raise the bar of its corporate governance which has already been widely recognized as one of the finest practices in Thailand.

“...that launching of this updated code shall reinstate the importance we give to integrity and ethical conduct to take a real life approach to it and provide cases which are applicable in the SCCC Group Company,” wrote Chairman of the Board of Directors of Siam City Cement Public Company Limited, Veraphan Teepsuwan, in the booklet’s preface.

*“Our enhanced code is an evolution of our previous version, underscoring the Group’s commitment towards doing business responsibly, honestly and ethically,”*  
**Wutthipong Songwisit,**

*Head of Legal at SCCC Group Company.*

“Our enhanced code is an evolution of our previous version, underscoring the Group’s commitment towards doing business responsibly, honestly and ethically,” added Wutthipong Songwisit, Head of Legal at SCCC Group Company.

The enhancement focuses on the fundamental aspects of responsible business in terms of maintenance and enforcement of clear, simple, rigorous ethical standards in professional practice, he pointed out.

Furthermore, INSEE’s revised code was benchmarked with world-class multi-national companies, noted Wasana Chaidhiraphunkul, Project Implementation Lead.

The revised code was launched in August 2015 and has already been systematically introduced to various functional layers within the SCCC Group Company and parties they are dealing with such as



customers, suppliers, business partners, communities and regulators. The code will empower all parties concerned to apply their best professional judgment at all time.

### **The enhanced code sets out clear and simple principles in four headings:**

- Do the right thing:**

That the Siam City Cement Group Company is committed to doing the right thing and expects the same from its employees and related stakeholders.

- Honesty and respect:**

Calling upon employees and stakeholders to act honestly and treat each other with respect, equality and dignity in order to create an environment whereby everyone involved is proud and happy at their workplace.

- Upholding our reputation:**

By observing this code in the day-to-day routine, employees uphold the reputation of the SCCC Group Company.

- Responsibility towards the Siam City Cement Group Company:**

The Code contains references to the Group's policies, relevant laws and regulations which spell out their responsibilities towards the Group and its stakeholders.



## **Speak up!**

Forming an integral part of INSEE's enhanced code is an effective whistleblower mechanism for good faith reporting about a known or suspected violation of the Group's code, policy or procedure, or any law or regulation.

Known as INSEE Speak Up Line, this is a dedicated communication channel newly created to enable employees and stakeholders to make disclosures and concerns related to fraud, misconduct and others.

Launched on September 1, 2015, this mechanism is run by an independent professional body.

Mr. Wuttipong noted that the establishment of INSEE Speak Up Line serves to break the culture of "none of my business" among many Thais, encouraging them to call attention to any wrongdoings which take place within the Company's circle.

Employees and vendors will be subject to disciplinary action should there be any form of retaliation, abuse of the reporting channel, falsifying reports or lack of cooperation.

All the incidents and details of reports made by whistleblowers will be kept confidential, and sharing of information requires approval of the Governance, Risk and Compliance Committee (GRCC).

### **Hot Line**



- **Tel: 02 676 5178**

office hours both in Thai and English



- **email: report@inseespeakupline.com**
- **web: www.inseespeakupline.com**
- **address: INSEE Speak Up Line, PO Box 17, Sathorn, Bangkok 10341**

# A Business Collaboration with a Difference Launched

INSEE Alliance aims to create value propositions



**The Siam City Cement Group Company has teamed up with key players in Thailand's building material manufacturing sector to launch a distinctive partnership that is instrumental to a synergy creation and support economic sustainability.**

The INSEE Alliance, a coalition of 12 leading firms with a combined annual turnover estimated at over 50 billion baht, took off to a good start in May 2015 by offering a comprehensive range of quality construction.

With the Group Company at the helm, this non-equity collaboration offers products and services which they have niche expertise in together in a business model meant primarily to sharpen the competitive edge, tapping potential to develop new products, broadening distribution base with new channels and new market strategies among Alliance members.

The joint marketing campaign through the Alliance also aims at maximising value propositions and benefits to all stakeholders, explained Tossapon

Hanpaisan, Customer and Marketing Analyst at SCCC looking after this project.

The Alliance comes with prominent companies producing structures, roofing, walls, flooring, and decorative materials, among others.

The line-up includes Siam City Cement Public Company Limited, Siam City Concrete Company Limited, INSEE Superblock Company Limited, Conwood Company Limited, Thai Gypsum Products PLC, The Union Mosaic Industry PLC, JBP International Paint Co., Ltd, Eco Coat Co., Ltd, Ceramic Roofing Products Co., Ltd, Aqualine Protarget Co Ltd, Viva Industries Co., Ltd, and Karat Faucet Co., Ltd.

The Alliance works by creating direct business opportunities, allowing efficient production and marketing management, sharing resources for optimal benefit, developing knowledge base leading to creating innovation and distinguishing itself from other industry players.

Mr. Tossapon pointed out: "Home owners have changed their behaviour and increasingly decide

what they want. Modern retail stores have also developed to respond to consumers' needs by offering them convenience, product varieties and shopping experience they offer."

For instance, a larger modern trade store offers more than 30,000 in product ranges, compared to anything from 100 to 1,000 at traditional outlets.

There are about 200 sites categorised as the modern trade channel nationwide and the numbers are rising while traditional outlets' figures are declining from the current level of some 4,000, according to one estimate.

Mr. Tossapon said that modern trade was approximately accounted for 25 percent of total construction material values in 2013 or 180 billion baht. In addition, it is most likely that the values from this certain channel will significantly be increased along with the trend of its format.

The supports rendered by the INSEE Alliance, which encourage buyers to source their products and services from dealers and sub-dealers, helps to re-consolidate their positions and developed in a long-term sustainable manner.

At the same time, Alliance partners stand to benefit from sustainable businesses transferred to them through these agents which have long been the mainstream distribution channels for many of them, at least for SCCC which alone possesses a strong nationwide network of 3,500 outlets.

Alliance partners aim to be at the forefront of the building material industry in a format that provides "win-win-win" to all parties concerned.

When choosing partners for the Alliance, the SCCC Group Company has placed great importance on their commitments towards SD concept –being highly responsible for society and environment.

"Our partners use raw materials and production processes, which are ecologically friendly, energy efficient, safe



and healthy, while engaged in community development that raise the well-being of people living in their operating environment," noted Mr. Tossapon.

***"Our partners use raw materials and production processes, which are ecologically friendly, energy efficient, safe and healthy, while engaged in community development that raise the well-being of people living in their operating environment."***

***Tossapon Hanpaisan***

*Customer and Marketing Analyst at SCCC*

Having staged four separate Alliance debut events in Bangkok, Chiang Mai, Phuket and Khon Kaen in 2015, the partnership will continue with this type of campaign in 2016 to extend this business model to wider "influencers."

## Saviour of Drought Crisis

Water from Siam City Concrete's quarries revitalise dying rice crops



**Farmers in Thailand's rice-growing provinces of Ayutthaya and Ang Thong were absolutely desperate for water to irrigate their parched fields.**

The worst drought in 15 years that hit most of the Kingdom, the world's largest rice exporter, came around June and July 2015.

The rainfall deficit took place at a critical time when rice plants were about to grow clusters of flowers from which they develop rice – a development that occurred 40-70 days after planting.

An atmosphere of hopelessness especially pervaded farmers in Ayutthaya's Phak Hai district and neighbouring Wiset Chai Chan district in Ang Thong, a two-hour drive north of Bangkok.

Without sufficient water, the livelihoods of some 700 people who were dependent on paddy farming would be seriously affected with some debt-ridden farmers being driven to bankruptcy.

An estimated income of over 25 million baht expected from the harvest from some 6,500 rais of cultivated land would have been completely lost.

But such dire straits was averted, not because the rain had miraculously come back, nor government agencies in charge of irrigation came up with a solution, but an assistance from an unlikely entity – Siam City Concrete Company Limited, a ready mixed concrete and aggregates distributor under the Siam City Cement Group Company.

The Company's sand quarries in Ayutthaya and Ang Thong had helped to revitalise the dying crops in their vicinities by channeling water accumulated in the excavated pits to those farmlands in need.



A total of about 1.3 million cubic metres of water were timely delivered from Siam City Concrete's quarries which produce sand which is used as a component for making ready mixed concrete.



***“What we did was really in good faith as a good corporate citizen who is conscientious about neighbours and the society at large”***

**Amarit Maneesaovanop**

*General Manager For Aggregates and Sand Operation at Siam City Concrete.*

That volume of water would have cost about 15.6 million baht if it came from commercial sources.

But it was given free of charge to those farmers by Siam City Concrete which also bore the cost of digging channels to allow water from the Company's "lakes" to flow into distribution canals, donating tonnes of sand bag for building banks and helping the Irrigation Department with water pumping.

It was here in Phak Hai where much of Siam City Concrete's water philanthropy was greatly felt with 5,000 rais of rice farm were saved.

"What we did was really in good faith as a good corporate citizen who is conscientious about neighbours and the society at large," said Amarit Maneesaovanop, General Manager for Aggregates and Sand Operation at Siam City Concrete.

It is part of the Corporate Social Responsibility (CSR) mission and a reflection of the Sustainable Development (SD) value the Siam City Cement Group Company uphold, he added.

Village headmen Thepakorn Krom-o-sorn and Uranun Pruekmart expressed deep gratefulness on behalf of farmers in Moo 7 and Moo 8 in Phak Hai district they represented.

"We were distressed and in crisis, without the help from the Company most of us would be bankrupt," recalled Uranun.

Thepakorn called Siam City Concrete a "saviour," as the government agencies and farmers themselves were running out of ways to overcome the confronting problems.

The sand pits of Siam City Concrete have become gigantic water reservoirs and can be disposed for economic and environmental purposes.

Siam City Concrete stands ready to extend similar assistance in diverting water resources from its Ayutthaya and Ang Thong operation to alleviate the hardship of farmers in their neighbourhoods in 2016 when the drought is expected.

"We will certainly help out, if requested, because we know this is the right thing to do and we do it willingly," concluded Prachya Yajom, Manager of Siam City Concrete's Phak Hai Quarry.



***“We will certainly help out, if requested, because we know this is the right thing to do and we do it willingly.”***

**Prachya Yajom**

*Manager of Siam City Concrete's Phak Hai Quarry.*

# SCCO Chips in for Coral Reef Restoration

Committed to donate artificial reefs under a CSV concept



**Nearly half of Thailand's most significant marine environment, the spectacular expanse of coral reefs on the coastal waters, has been lost.**

The rest of those sensitive coral reefs are facing detrimental effects if no serious actions were taken against the root causes of such destruction.

The escalation of destructive fishing (overfishing), sedimentation and pollution, coastal reclamation, coral bleaching, and even tourist-related damage are among major contributors to the threat.

Thailand is socially and economically dependent upon precious coral reef ecosystems.

Studies show that the Kingdom's coral reefs support 4,000 species of fish, 700 species of coral, thousands of plants and animals and are sheltered to one in every four marine species.

They provide vital protection for shorelines against erosion, storm and wave damage, while offering an incredible diversity of beneficial medical benefits.

Fishery industry is an important part of the Thai economy, generating over 100 billion baht in direct annual revenue, or contributing 1.6 percent to its GDP.

In view of the growing threats over reef condition and concerns about its implications, it is important that parties concerned must not only stop the destruction but strive to rebuild these coral reefs. Building artificial reefs is an essential part of the restoration.

## Joining the effort

Producing artificial reefs is a contribution that Siam City Concrete Company Limited (SCCO), a concrete supplier under Siam City Cement Group, has wanted to make to the restoration effort.

The idea of producing artificial reefs out of surplus concrete returned from SCCO's customers, which would be otherwise disposed, emerged during a review of the Group's Corporate Social Responsibility (CSR) in November 2014, recalled Yongyut Sangangam, Manager for Corporate Sustainability Development Department at SCCC.

"We discussed what other meaningful and environmental friendly applications for the returned concrete to add to our lists to benefit the society as a whole, and making artificial reefs was struck as a good idea because of the timeliness of the issue," he said.

For years, SCCO has turned the surplus concrete into road barriers, footpath blocks, plant pots, benches and construction bases and donating them various parties in need such as schools, local communities and government agencies.

***“We discussed what other meaningful and environmental friendly applications for the returned concrete to add to our lists to benefit the society as a whole, and making artificial reefs was struck as a good idea because of the timeliness of the issue.”***

***Yongyut Sangangam***

*Manager for Corporate Sustainability  
Development at SCCC*

The idea was also adopted because of its conformity with the Creating Shared Value (CSV), a business concept, created by Harvard Professor Michael Porter and Harvard Kennedy School of Government Senior Fellow Mark Kramer, that links competitive advantage and CSR which the Group Company is embracing.

“CSV is a powerful concept that can prompt companies to think differently about their approach to social and environmental issues,” Mr. Yongyut explained.

Simply put, CSV is about using resources or competitive edges of a company to create social benefits while the firm also receives economic advantages in parallel.

In other words, the CSV is doing away from donation, a philanthropic act featured in many conventional CSR programmes, according to Yongyut.

The idea of making artificial reefs has since been developed into an action plan in conjunction with the Department of Marine and Coastal Resources (DMCR).

Pending approval from DMCR, the plan basically calls for SCCO to initially produce 300-500 pieces of artificial reefs in two shapes mandated by DMCR - a cubic square and a dome - and turning them over to the agency free of charge.

Eight SCCO production sites, situated in Rayong, Prachuab Khiri Khan and Phuket, have been



commissioned for the production because of their proximity to DMCR's targetted restoration areas.

Prototypes of the artificial reefs in both shapes were made at SCCO's Rayong and Phuket sites.

SCCO expects to finalise details of its artificial reef production with DMCR in April 2016 and starting delivering them to DMCR in the second half of the year.

On the ground, SCCO staff is committed to contribute to the effort voluntarily.



“I and my colleagues are pleased and proud to play a role in rebuilding new homes for our marine lives, recovering the sea ecosystem,” said Ekachai Upakankaew, Supervisor at SCCO's Talang plant in Phuket.

For the months to come, he said his team is prepared to work hard over time to fulfill delivery schedules for the artificial reefs.

# A school Extraordinaire with Sustainability at Heart Emerges

Baan Pa-Ger-Yor was built under the fully integrated green school concept



**In a small rural area that straddles the Thailand –The Republic of the union of Myanmar border in Petchaburi, there is a community whose members hardly speak Thai though the presence of their ancestors in the Thai territory dates back nearly 80 years ago.**

Those villagers, numbered about 1,500 in over 200 households, speak Karen. They have been living barely in a subsistence level mostly on farming.

The village cannot be accessed by roads simply because there are none, and it can only be reached by trails through hilly wild crossing three streams. Located in the vicinity of the Kaeng Krachan, the largest national park in Thailand.

An extraordinary school has emerged at the community where about 100 children, aged between 4 and 10, are in need of education.

Welcome to the **INSEE Integrated Green School** at Baan Pa-Ger-Yor, a public undertaking spearheaded by SCCC in conjunction with the Border Patrol Police (BPP), the champion of school builders in rural Thailand. The official name of school is **INSEE Arsa Border Patrol Police School**.

It is the second establishment which came under the Company's successful Integrated Green School

(IGS) concept that serves to cultivate sustainability not only among rural juveniles but the villagers as a whole.

The Baan Pa-Ger-Yor IGS follows largely the model at Baan Nam Bor Sapeh, the far-flung highland in Pang Mapha district of Mae Hong Son, which redefined the next generation of SCCC's Green School development with greater profoundness.

***“INSEE Arsa BPP School is more than a school, but a place serves as a catalyst for a change for the betterment in education, quality of life, and environment.”***

**Natreudee Katintes**

*SCCC officer in charge of the undertaking*

Up and running in 2015, the Baan Nam Bor Sapeh school was also built to commemorate HRH Princess Maha Chakri Sirindhorn's 60<sup>th</sup> Birthday Anniversary Celebration in early 2015 and hence officially named "Chalerm Phra Kiat 60 Pansa."

“INSEE Arsa BPP School is more than a school, but a place serves as a catalyst for a change for the betterment in education, quality of life, and environment,” said Natreudee Katintes, the SCCC officer in charge of the undertaking.



An IGS is not a typical place for learning, but the one that includes green elements which cover much wider aspects of a school that embraces the sustainability principle from which SCCC's Corporate Social Responsibility (CSR) was built on.

For instance, the water usage management, efficient energy supply, waste management system, food supply chain, farming and communal marketing are incorporated in a self-contained manner, all within the IGS' environment.

To ensure their success, these elements are guided, conducted and reviewed by experts from their respective fields of specialisation.

In particular, the principle of Huai Sai Development Study Centre, which was dedicated to rehabilitate natural resources and environment in Phetchaburi, was applied for the Baan Pa-Ger-Yor project.

The IGS at Baan Pa-Ger-Yor was developed over a 15-rai land with an 8-million-baht funding from SCCC.

Construction began in September 2015, it is completed with a clinic, a cooperative, a garbage sorting area and space dedicated for organic farming including raising chicken, duck, catfish and frogs.

It is the 29<sup>th</sup> school which SCCC has proudly constructed and renovated in Thai rural and remote areas overseen by BPP in the past six years.

The school itself is capable of conducting classes for up to 350 primary pupils from pre-kindergarten level to grade 6 with eight teachers, six of whom are assigned by BPP.

While the new school building and related facilities are due for official opening in June 2016. The IGS at Baan Pa-Ger-Yor is finished partly by about 120 SCCC volunteers banded under the **INSEE ARSA** philanthropic group.

It is built based on a selected design from an activity of Panya Arsa early in 2015 held at Chulalongkorn University's Faculty of Architecture with a conscious aim to inspire and involve students in socially responsible activities.

Since the Green School initiative was launched in 2010, over 8,000 underprivileged pupils at 29 rural locations in Thailand have had proper places for formal education while serving as a role model for the communities to adopt eco-friendly lifestyle and green economy.

## Bringing Together the Voices of Communities

INSEE Community Dialogues provide casual forums on what matter villagers most



**After a long day at work, Sunan Sumrianram and his colleagues at Community Relations Department (CRD), do not go straight home or find a place to rest or entertain, though sometimes it may be tempting to do so.**

For 15 evenings in 2015, the team hopped from one community to another in Tubkwang district in Saraburi to organise the INSEE community dialogues, aka community evening visits.

For a few hours in the evening, neighbourhood leaders, faith leaders, local government officials, educators, youths and CRD people are seated in a circle or a "U" formation to discuss issues relevant to communities.

This initiative brings together the voices of communities to create awareness and understanding, generating and exchanging ideas, drawing up plans, following up and appraising past performance, as well as foster relationship among stakeholders. The forum encourages people to speak openly about matters which affect their lives and to bring solutions that truly responds to the needs of community members, explained CRD Manager, Mr. Sunan.

"Dialogue is beyond a communication, but a process that involves listening and responding, not just conveying our own perspective, though it is essential to do that as well," he noted.



***"Dialogue is beyond a communication, but a process that involves listening and responding, not just conveying our own perspective, though it is essential to do that as well."***

***Sunan Sumrianram***

*Community Relations Department Manager*

This activity is an umbrella among other programmes i.e. education, environment, healthcare, business

enterprises and infrastructure development which INSEE carries out.

This is to complement and supplement one of the six focuses and commitments laid down by INSEE's Sustainable Development, specifically under the Community Involvement and Development.

"Active involvement of community, which is part of stakeholders, is crucial to the success of SD," Mr. Sunan pointed out.

In 2015, a total of 450 people from 32 communities surrounding the INSEE's Saraburi operations have taken part in the dialogues which started after they finished their works, a convenient time considering that 80 to 90 percent of community members worked at industries in their neighbourhood.

Feedback from community members on the dialogues so far has been positive especially from the perspective of a strong sense of participation and the open and honest nature of the forums.

More importantly, the dialogues provide the opportunities for them to set an agenda for SD development in their neighbourhoods which may not be covered earlier in the master plans put forward by the INSEE Saraburi team.

Booncherd Kwangcharoen, the village headman of Moo 5, agreed saying that the free expression of



thoughts have actually led to fulfillment of the needs of communities.

He cited community plumbing systems installed at communities as one of the SD projects on the community levels resulting from the evening dialogue forums.

"What INSEE has been doing is they are filling the gap in community development projects which the government has been unable to carry out," said the 47-year-old Village Headman and a farmer.



***"What INSEE has been doing is they are filling the gap in community development projects which the government has been unable to carry out."***

**Booncherd Kwangcharoen**

*The Village Headman of Moo 5*

Mr. Booncherd described the INSEE's SD community schemes as an excellent undertaking that is very useful to raise the standard of living in a sustainable manner for 2,050 people in the Moo 5 neighbourhood.

The success of the community dialogues has prompted the CRD to continue with the concept on a broader scale to cover other areas within the 25-km radius of the Saraburi operations, according to Mr. Sunan.

Among those in the plan are communities located in the sub-districts of Baan Pa, Taklor, Muaklek, Mitraparp and Klangdong which will be high on the list for 2016 implementation.

# SCCC Advances Green Product Development

Three key new innovative offerings launched



**Two thousand and fifteen was another landmark year for the development of eco-friendly products at Siam City Cement Public Company Limited.**

Three new products were launched, bringing the Company's portfolio of green construction materials to 24, one of the most extensive lists of its kind in Thailand.

The new additions, qualified as "green" under the globally-recognised ISO:14021 guidelines, are High Strength Concrete (HSC), Portland Composite Cement (PCC) and Cellular Lightweight Concrete (CLC).

The introduction of these new products has once again reflected SCCC's commitment that spanned over a decade towards developing products and services which are ecologically friendly, embracing sustainability and meeting market demand, said Dr. Wonchaler Chalodhorn, manager of Product Development Department at SCCC.

More specifically, these products meet one or more of the SCCC's 7-point Green Heart Label criteria which wrap around the philosophy of "5Rs" –reduce, reuse, recycle, replace and reinvent.

SCCC's commitment in developing innovative green products was reflected by a 32 percent increase in expenditure earmarked for the purpose in 2015 as compared to 2014.

The outstanding feature that makes HSC "green" is the greater use of fly ash, a waste from local coal-fired power plants, as a mixture, to nearly 30 percent from 20 percent earlier.

That higher percentage corresponds with one the seven point Green Heart Label Criteria, i.e. reducing resource use which in this case is cement input, by 11.8 percent from the previous version of HSC, according to Dr. Wonchaler.

He cautioned that the greater fly ash input volume does not result in compromising HSC's key usage property –high compressive strength.

Known as INSEE Petch Rak Loke as a brand, PCC has achieved similar objective in reducing resource consumption by a cutback in clinker contribution with a clinker substitution material.

Clinker substituted material's input in PCC is roughly quadruple compared to those seen in INSEE Petch, the generic product on which INSEE Petch Rak Loke is based.

In the process, INSEE Petch Rak Loke has also reduced carbon dioxide (CO<sub>2</sub>), a green house gas, by approximately 5% from the level of the typical INSEE Petch, thus achieving another requisite for SCCC's Green Heart directives.

What makes CLC a green product is its lower thermal conductivity than typical clay bricks used for building internal walls.

By using CLC for such purpose can reduce energy consumption in buildings, therefore addresses "reducing energy consumption" as stipulated in the Green Heart criteria.

Dr. Wonchaler said that the CLC's thermal conductivity is 4.8 times lower than clay bricks, explaining why the room built with CLC is cooler.

The secret of making CLC lies in the addition of foam generator in the production of CLC in order to create "bubbles" in the content to make it more airy.

Yet, CLC is lighter than clay blocks in weight and offering good fire resistance, sound and thermal insulation, he added.

## Conwood Extends Range

Meanwhile, development of green products has moved on at Conwood Co, a SCCC subsidiary specialising in fibre cement production.

The 12-year-old company successfully rolled out three products in 2015 to build on its range of environmentally-friendly offerings which respond to dynamic consumers' needs.

One of the innovative wood replacement products is Conwood Deck which incorporates Nano colouring in the production and featuring “T-Lock” system.

Here the colours are ingrained as an integral part of the wood-like planks right from Conwood's Saraburi plant, thus doing away the old practice of painting the desired colours over them.



Conwood's Saraburi plant Nano colouring

This Nano colouring technique results in colours being last longer, up to five years, compared to three years if the painting is applied, Cholawut Chivapruk, manager at Conwood's Development and Innovation Department, pointed out.

The Conwood Deck, which can be used for interior and exterior flooring, comes with two popular shades - mahogany red and teak brown.

Their market debut also came with the introduction of T-Lock, a device which allows the planks to be put together without screws and with great ease to bring out a good finish, he added.

These additional products boosted Conwood's product range to 40, all made with 70 percent cement and 30 percent fibre, falling in line with the sustainability and ecology protection principles.

## Stride in Green Product Sales

All in all, SCCC was able to continue to achieve a high percentage of distribution of its green products whose sales represented about 30 percent of the Company's total revenue in 2015.

“Sales of SCCC's green products have become a force to be reckoned with and we are working strenuously to raise their profiles in the coming years,” noted Dr. Wonchaler.

Enhanced communication effort through a series of activities organised by SCCC to promote the green building philosophy went down the year as one of the achievement to support the endeavour to promote its green products.

Those training course, business networking, convention and conference were largely oriented towards what SCCC could contribute to the US Green Building Council's LEED (Leadership in Energy and Environmental Design) standards and the Thai Green Building Institute for the TREES (Thai's Rating of Energy and Environmental Sustainability) benchmark, according to Dr. Wonchaler.

Aiding the effort was the release in the year of a 22-page publication (Green Product Catalogue) that provided details of overall green products the Company has had to offer.



# A Member of CSI

A Step Toward Sustainability at International Level



**Cement Sustainability Initiative (CSI) is a voluntary gathering of 26 major global cement producers, with operations in more than 100 countries, under the World Business Council For Sustainable Development (WBCSD), which is a CEO-led organization of forward-thinking companies that galvanizes the global business community to create a sustainable future for business, society and the environment.**

The visions of the Board of Directors and the management, which explicitly show confidence in the business operations are geared towards sustainable growth and development, have entrusted the SCCC working team with the study of the conditions and the regulations that all CSI members are obligated to comply in accordance with all CSI sustainability standards and the application for the CSI membership.

We have found that almost of the SCCC's sustainability management standards are in accordance with the international guidelines which CSI has set. Thus, our application for the membership at CSI had been smoothly processed and was officially confirmed in October 2015. CSI also praised SCCC for the determination to operate along the sustainable development guidelines and various sustainability standards the company has committed to and adopted.

Becoming a CSI member has never been only about the membership fee. The most important things that each member must commit to are the participation, the support and the operations which are in line with the CSI Charter — a summary of the individual member actions which emphasizes the operational standards, the cooperation to mitigate environmental

impacts and the setting of standards related to all reports. Key focuses of CSI include global climate change, alternative energy, work safety, water management, air quality management, the promotion of biodiversity and its rehabilitation, the sustainable construction, and the transparent disclosure of important information.

## **The Value of Becoming a CSI Member**

### **The development of employees**

This is an important tool for our employees to be able to exchange "best practices" with other world's leading cement producers, through the participation in a joint team program or in various major global seminars.

### **The development of the sustainability management to reach international standards**

The climate change issue and the increasing of expectations of the cement industry from stakeholders. Therefore, we need to focus our work on this issue according to international standards, and being a part of CSI is a crucial strategy for our sustainability.

### **The creation of shared value for stakeholders**

We believe that CSI standards and guidelines will help SCCC to create shared value for stakeholders and our business, the society, the environment as well as the world.

### **The promotion of good image**

The widely-recognized image of CSI at the international level, for its achievements and activities related to sustainability, SCCC's being a part of CSI will help enhance the good image of SCCC, particularly in the area of sustainable development.

» For more detail on CSI, please refer to [www.wbcsdcement.org](http://www.wbcsdcement.org)

KEY PERFORMANCE INDICATORS OF THE CSI			
KEY KPIs	2015	2014	2013
<b>Climate protection</b>			
Total CO <sub>2</sub> emissions - gross (million tonnes)	10.06	9.58	8.66
Total CO <sub>2</sub> emissions - net (million tonnes)	9.76	9.32	8.45
Specific CO <sub>2</sub> emissions - gross (kg / tonne cementitious material)	721	709	694
Specific CO <sub>2</sub> emissions - net (kg / tonne cementitious material)	699	690	678
<b>Responsible use of fuels and raw materials</b>			
Specific heat consumption of clinker production (MJ / tonne clinker)	3,120	3,146	3,090
Alternative fuel thermal substitution rate (%)	10.0	11.3	12.3
• Alternative fuel rate (%)	9.8	8.8	7.7
• Biomass fuel rate (%)	0.2	2.5	4.6
Alternative raw materials rate (%)	1.2	1.9	1.7
Clinker / cement ratio (%)	83.6	82.7	82.5
<b>Safety</b>			
Number of fatalities (directly employed)	0	0	1
Number of fatalities per 10,000 directly employed	0	0	4.65
Number of fatalities (indirectly employed)	0	2	2
Number of fatalities (third party)	0	0	1
Number of lost time injuries (directly employed)	2	1	1
Total Number of lost time injuries	5	4	3
Lost time injuries per 1 million man-hours (directly employed)	0.36	0.18	0.2
<b>Emissions reductions</b>			
Overall coverage rate : percentage (%) of clinker produced with monitoring of all pollutants mentioned in the emissions guidelines	100	100	100
Coverage rate continuous measurement : percentage (%) of clinker produced with continuous monitoring of main pollutants, Dust, NOx, SO <sub>2</sub>	100	100	100
Dust - coverage rate (%)	100	100	100
NOx - coverage rate (%)	100	100	100
SO <sub>2</sub> - coverage rate (%)	100	100	100
Dust - specific emissions (grams / tonne clinker)	55.6	41	68
NOx - specific emissions (grams / tonne clinker)	1,281.3	980.5	1,002.7
SO <sub>2</sub> - specific emissions (grams / tonne clinker)	73.5	64.1	63.3
<b>Local impacts on land and communities</b>			
Percentage (%) of sites with community engagement plans in place	100	100	100
Percentage (%) of sites with quarry rehabilitation plans in place	100	100	100

# Awards & Recognition 2015



## Thailand & ASEAN Energy Awards

Awarded to SCCC:

**Thailand Energy Awards 2015** (Awarded by the Ministry of Energy)

- **Innovation of Sludge Utilization as Alternative Fuel in Cement Kiln**
  - The Outstanding Award in the Special Submission Category
- **RDF for Co-Processing in Cement Kilns**
  - The Outstanding Award in the Off-Grid-Thermal Category
- **The Green Park**
  - The Outstanding Award in the Tropical Building Category

**ASEAN Energy Awards 2015** (Awarded by the ASEAN Centre for Energy)

- **Innovation Of Sludge Utilization As Alternative Fuel In Cement Kiln**  
The Winner in the Special Submission Category
- **RDF For Co-Processing In Cement Kiln**  
The First Runner-Up in the Off-Grid Thermal Category
- **Suan Ming Mongkol** or INSEE Green Park  
The Winner in the Tropical Building Category



## CSR-DPIM Continuous Award

Awarded to SCCC by Primary Industries and Mines  
Ministry of Industry



## CSR-DPIM Award

Awarded to SCCC and SCP by Primary Industries and Mines  
Ministry of Industry



## Green Mining Continuous Award - Mine Category

Awarded to SCCC and SCCO (INSEE Supanburi)  
by Primary Industries and Mines  
Ministry of Industry



## Thailand ICT Excellence Awards 2015

Awarded to SCCC  
by the Thailand Management Association (TMA)



## 3Rs and Zero Waste to Landfill Achievement Award

Awarded to INSEE Ecycle  
by the Department of Industrial Works  
Ministry of Industry



### Excellence in Labour Relations and Labour Welfare Year (consecutive years 2007-2015)

Awarded to SCCC by Department of Labour Protection & Welfare Ministry of Labour



### Gold Medal on the Standard of Industrial Waste Processor

Awarded to INSEE Ecocycle by the Department of Industrial Works Ministry of Industry



### Zero Accident Campaign

Awarded for 1,000,000-2,999,999 hours of operations without severe accidents (for 3<sup>rd</sup> year). Awarded to Conwood, by the Department of Labour Protection and Welfare, Ministry of Labour



### National Excellent Performing on Occupational Safety, Health and Environment Award

Awarded to SCCC (Plant 3-continous award ) and Conwood by the Department of Labour Protection and Welfare, Ministry of Labour



### Consumer Protection Thailand Call Center Award

Awarded to SCCC by The Office of the Consumer Protection Board or OCPB and the Management System Certification Institute (Thailand) or MASI



### ATD Excellence in Practice Award 2015

Awarded to SCCC by the Association for Talent Development - America



### Carbon Footprint for products certification

Awarded to SCCC INSEE Mortar, and SSCO by the Thailand Greenhouse Gas Management Organization

# SD Data

## ECONOMIC PERFORMANCE

SD INDEX - ECONOMIC PERFORMANCE				
	GRI	2015	2014	2013
<b>Sales (in Million Baht)</b>				
Net Sales	<b>EC1</b>	31,120	31,862	29,949
Input Factor (Cost of all goods, materials and services)	<b>EC1</b>	19,790	20,661	19,601
Depreciation and amortisation	<b>EC1</b>	1,592	1,253	1,166
<b>Value Creation (in Million Baht)</b>				
Benefit to employees	<b>EC1</b>	3,604	3,265	2,928
Benefit to government (taxes)	<b>EC1</b>	1,101	1,228	1,153
Benefit to shareholders	<b>EC1</b>	3,450	3,450	3,220
Benefit to creditors	<b>EC1</b>	453	373	305
Retained in business	<b>EC1</b>	1,129	1,632	1,576
<b>Sustainable Products(%)</b>				
Cement Products containing mineral components	<b>EN2</b>	1.2	1.9	1.7
<b>Suppliers (%)</b>				
Suppliers screened (OH&S,labour standards, legal compliance, environmental standards, as percentage of spending)	<b>HR1</b>	99	99	99
<b>Government Relations (in Million Baht)</b>				
Political contributions	<b>S06</b>	0	0	0
Government subsidies received	<b>EC4</b>	0	0	0
<b>Customer Relations</b>				
Customer satisfaction surveys conducted	<b>PR5</b>	YES	YES	YES

# SD Data

## ENVIRONMENTAL PERFORMANCE

SD INDEX - ENVIRONMENTAL PERFORMANCE				
	GRI	2015	2014	2013
<b>Materials Used</b>				
Limestone (%)	<b>EN1</b>	79.4	81.3	82.2
Shale (%)	<b>EN1</b>	16.9	16.4	15.4
Additives (%)	<b>EN1</b>	2.5	0.5	0.7
Alternative Raw Materials (%)	<b>EN1</b>	1.2	1.9	1.7
<b>Environmental Investments and Compliance</b>				
Environmental investment (million baht)	<b>EN30</b>	111.5	550.8	656.9
Provisions for site restoration (million baht)	<b>EN13</b>	54.9	67.5	69.3
Non-compliance cases	<b>EN28</b>	0	0	0
Associated fines and penalties (million baht)	<b>EN28</b>	0	0	0
<b>Energy</b>				
Fuel consumption (MJ/ton clinker)	<b>EN3</b>	3,120.1	3,146.3	3,090
Electricity consumption (kWh/ton cement)	<b>EN3</b>	95.96	97.6	96.7
Alternative fuel thermal substitution rate (%)		10.0	11.3	12.3
<b>CO<sub>2</sub> Emissions</b>				
Net CO <sub>2</sub> Emissions (kg CO <sub>2</sub> /ton cementitious material)	<b>EN16</b>	699.1	690.0	676
Clinker factor (%)		83.6	82.7	82.5
<b>Other Atmospheric Emissions</b>				
NOx (grams/ton cementitious material)	<b>EN20</b>	979.5	825.2	824
SO <sub>2</sub> (grams/ton cementitious material)	<b>EN20</b>	55.7	53.9	52
Dust (grams/ton cementitious material)	<b>EN20</b>	37.2	34.5	55
<b>Water</b>				
Water withdrawn from wells and rainwater collected for cement production (m <sup>3</sup> )	<b>EN8</b>	2,887,780	2,791,451	2,609,164
Water withdrawn from wells and rainwater collected for waste heat recovery (m <sup>3</sup> )	<b>EN8</b>	1,295,386	1,189,966	1,101,827
Water recycled or reused (%)	<b>EN10</b>	84	66	64

# SD Data

## SOCIAL PERFORMANCE

SD INDEX - SOCIAL PERFORMANCE				
	GRI	2015	2014	2013
<b>Employee Practices</b>				
<b>Number of employees</b>	<b>LA1</b>	3,823	3,652	3,258
<b>Proportion of employees by level (%)</b>	<b>LA1</b>			
• Top & senior management		3	3	3
• Middle level management		38	36	36
• Other employees		59	61	61
<b>Portion of female employees by level (%)</b>	<b>LA12</b>			
• Top & senior management		22	17	15
• Middle level management		36	36	37
• Other employees		11	11	9
<b>Ratio of female to male salary</b>	<b>LA13</b>			
• Top & senior management		0.84	0.81	0.80
• Middle level management		0.96	0.97	0.92
• Other employees		0.86	0.85	1.00
<b>Portion of local employees (%)</b>	<b>LA12</b>	99.95	99.92	99.94
Employee turnover (%)	<b>LA1</b>	7.38	7.01	5.46
Employee satisfaction survey conducted		YES	NO	NO
<b>Training</b>				
Average hours of training per employee	<b>LA9</b>	49.02	47.42	43.72
<b>Occupational Health and Safety</b>				
Number of fatalities (employees, contractors, visitor and other)	<b>LA6</b>	2	3	7
Lost time injury frequency rate (employees and contractors per million man-hours)	<b>LA6</b>	0.27	0.37	0.25
<b>Community Involvement</b>				
Donations, CSR and Community Spending (million baht)	<b>EC1</b>	36.2	40.9	35.7
<b>Stakeholder Engagement</b>				
Needs assessments	<b>SO1</b>	YES	YES	YES
Stakeholder Engagement in CSR planning	<b>SO1</b>	YES	YES	YES
Stakeholder dialogues	<b>SO1</b>	YES	YES	YES
Community advisory panels	<b>SO1</b>	YES	YES	YES



## Siam City Cement Public Company Limited

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**Fax: +66 2 797 7001-2**  
**[www.siamcitycement.com](http://www.siamcitycement.com)**

### **Subsidiaries:** [www.siamcitycement.com](http://www.siamcitycement.com)

#### **Siam City Concrete Company Limited**

Siam City Concrete produces a wide range of ready-mixed concrete for sale in Bangkok, the Eastern Seaboard and in many locations around Thailand.  
Phone: +66 2 797 7555  
Web: [www.inseconcrete.com](http://www.inseconcrete.com)

#### **Conwood Company Limited**

Conwood produces high-quality, innovative and superiorly designed fiber cement products used as decorative and building materials.  
Phone: +66 2 797 7444  
Web: [www.conwood.co.th](http://www.conwood.co.th)

#### **Siam City Power Company Limited**

Siam City Power generates electricity from waste heat recovered from the cement production process.  
Phone: +66 2 797 7000

#### **INSEE Superblock Company Limited**

INSEE Superblock innovates and produces light-weight concrete solutions.  
Phone: +66 2 797 7000

#### **INSEE Ecocycle Company Limited**

Waste management business unit providing state-of-the-art waste disposal service .  
Phone: +66 2 797 7000  
Web: [www.inseecocycle.com](http://www.inseecocycle.com)

#### **INSEE Digital Company Limited**

Tasked with building leading information technology solutions for Siam City Cement Group Company.  
Phone: +66 2 797 7000