

SCG Greenhouse Gas Management

SET SD Forum

4 Apr 2017

SCG Business overview



SCG Cement-Building Materials

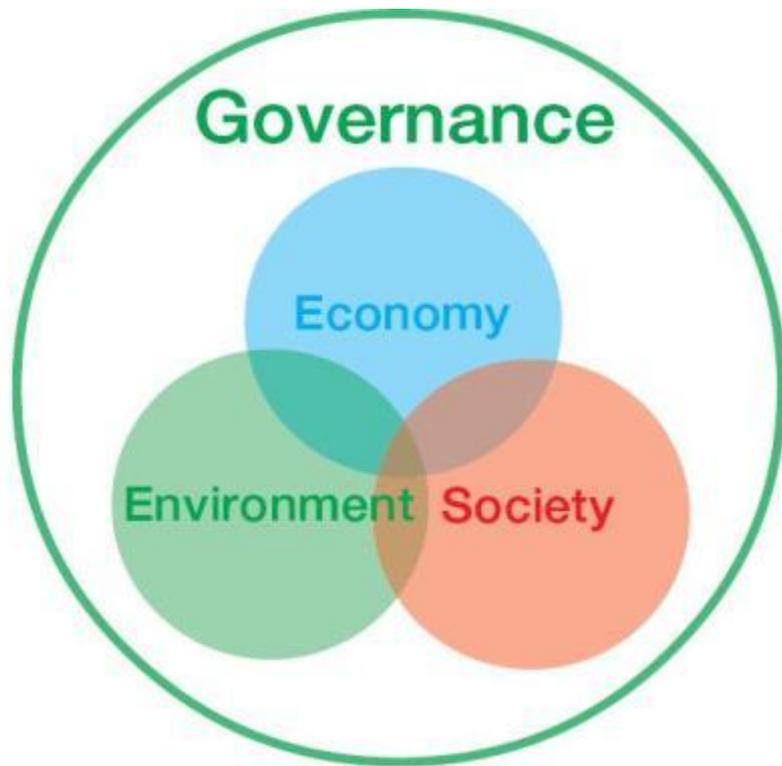


SCG Chemicals



SCG Packaging

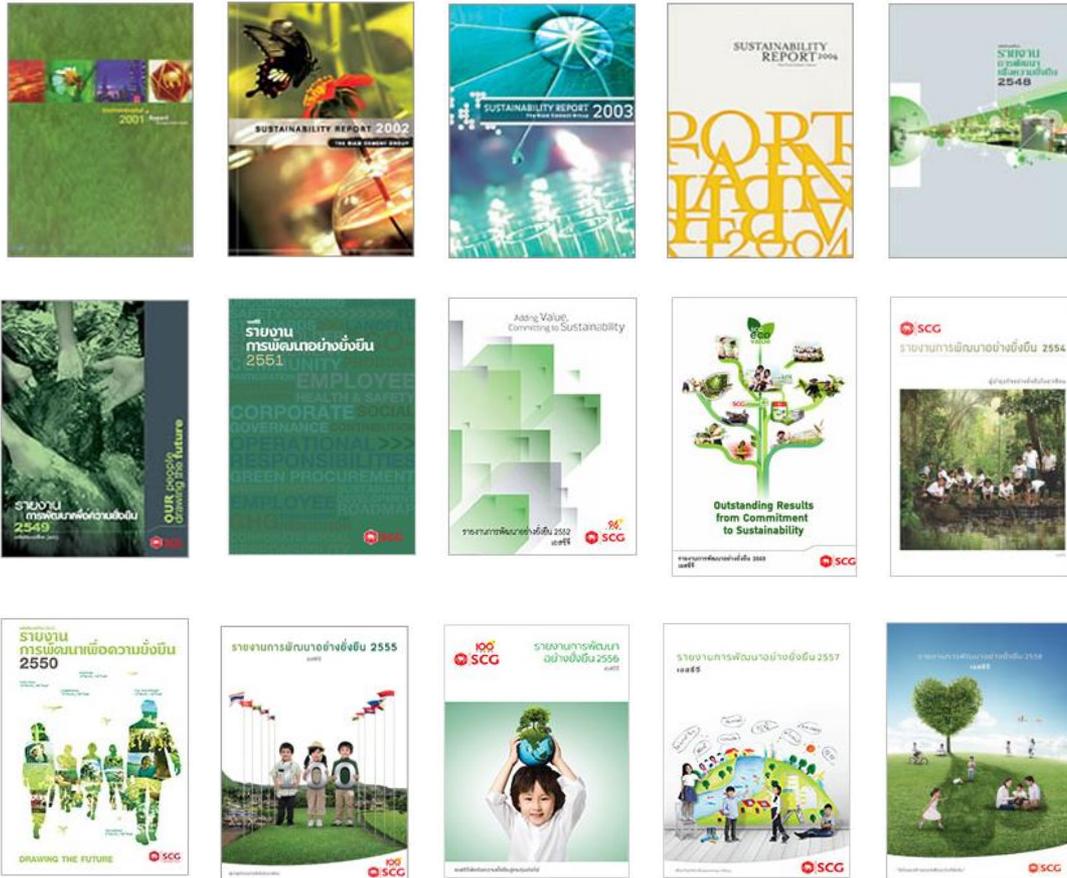
SCG business practice is governed by sustainability principles that respond to the needs of the society, community and environment.



Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

(Brundtland Report, World Commission on Environment and Development, 1987)

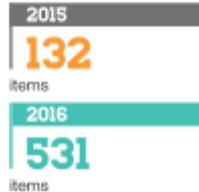
SCG monitor and report Greenhouse Gas (GHG) emission in Sustainability Report since 2001.



http://www.scg.co.th/th/05sustainability_development/03_sustainability_report.html

SCG 2016 Sustainability Highlight

Carbon Label Certified (Carbon Reduction Label and Carbon Footprint Label)



SCG eco value Products and Services



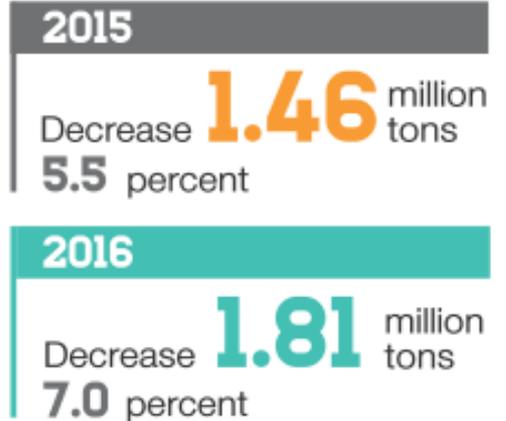
Dow Jones Sustainability Indices (DJSI) /Robeco Sustainable Asset Management



Alternative Fuel



GHG Emissions (compared with BAU 2007)



Pride of SCG 2016



H.R.H. Princess Maha Chakri Sirindhorn's Trophy for Thailand Corporate Excellence Awards 2016



SET Sustainability Awards 2016 2nd consecutive year



Carbon Footprint Reduction Certificate from Thailand Greenhouse Gas Management Organization (Public Organization)



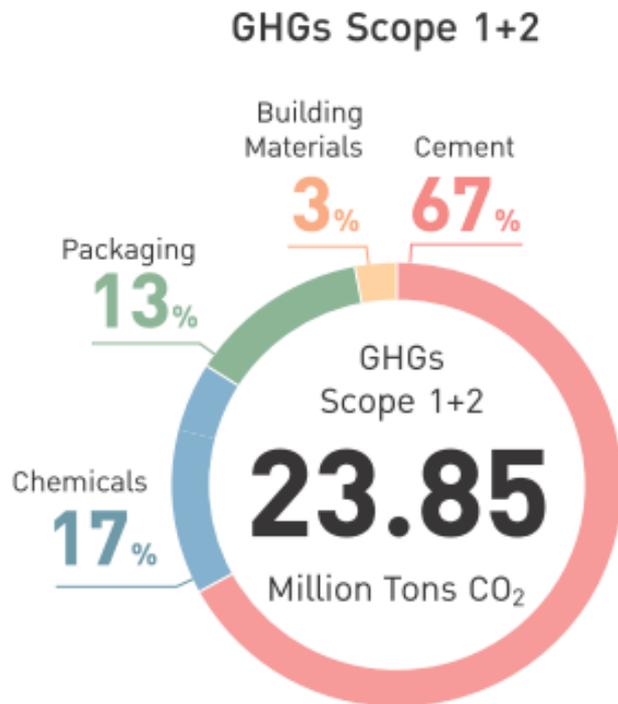
The Prime Minister's Best Industry Award 2016



Eco Factory from The Federation of Thai Industries

Greenhouse Gas emission 2016

Performance Data	2012	2013	2014	2015	2016	G4
GHG Scope 1 (Million Tons CO ₂)	21.69	21.34	22.12	22.51	21.51	*EN15
GHG Scope 2 (Million Tons CO ₂)	2.46	2.47	2.62	2.47	2.34	*EN16



Cement process is SCG main source of GHG emission from limestone calcination and fossil fuel combustion. Therefore, many projects were initiated to reduce GHG.



SCG Cement (Lampang)

GHG reduction projects in SCG were implemented, monitored and verified by various standards



Project: Waste heat and Power Generation
Protocol: CDM



United Nations
Framework Convention on
Climate Change

CO2 reduction: 300,000 tCO2/year
Electricity generation 620 GWh/y



Project: Biomass for cement kilns
Protocol: VCS



CO2 reduction: 200,000 tCO2/year
Reduce coal 300,000 t/year



Project: RDF production from MSW
Protocol: T-VER



CO2 reduction: 1,100 tCO2/year
Manage MSW 60 t/day

Carbon footprint was monitored in both product level and company level, for future carbon reduction mechanism



29 products



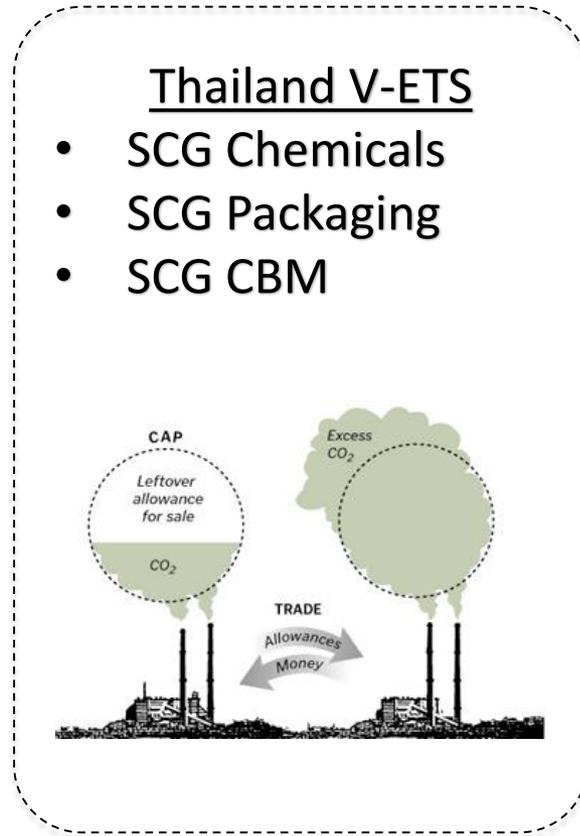
456 products



46 products



18 companies



Example of SCG product with Carbon Footprint

Paper box CFP = 1.5 kgCO₂/kg



PVC pipe CFP = 0.4 - 1.1 gCO₂/cm³



Cement CFP = 22 - 59 kgCO₂/bag



Ready mixed concrete CFP = 260 kgCO₂/m³



Plastic HDPE CFP = 2 kgCO₂/kg



Ceramic tile CFP = 13 - 14 kgCO₂/m²



Next step is to expand this GHG reduction concept through SCG supply chain

Upstream Supply Chain

- Green procurement
- Supplier development for sustainability



Green Manufacturing

- 3Rs
- TQM/TPM/IBE
- SPAP/EPAP

Downstream Supply Chain

- SCG eco value
- Recycle materials
- HVA product



Glossary

TQM - Total Quality Management

TPM - Total Productive Maintenance

IBE - Integrated Business Excellence

SPAP - Safety Performance Assessment Program

EPAP - Environmental Performance Assessment Program

HVA - High Value Added Product and Service

Economic benefits of GHG monitoring include :

1. Increase in sales of SCG eco value product
2. Energy efficiency & alternative fuel saving
3. Sales of Carbon credit

