

## Factsheet: SD Symposium 10 Years:

### Circular Economy - Collaboration for Action (Set 2)

#### SCG's Efforts to Encourage Collaboration to Drive Circular Economy with All Sectors

##### 1.) Collaboration for Sustainable Business

- **Industry in Overall.** Forge partnerships with global and national organizations to implement sustainable business practices
  1. The World Business Council for Sustainable Development (WBCSD)
  2. The United Nations (UN)
  3. The Thai Chamber of Commerce
  
- **Construction Industry**
  1. **Partnering with Global Cement and Concrete Association (GCCA)**
    - As a member of GCCA, a CEO led industry initiative, SCG strives to be part of creating sustainability, reducing impacts caused by cement activities, and promoting engagement of all stakeholders throughout the value and supply chain. It is committed to promoting the unique properties of concrete as a sustainable, durable, and resilient building material that will answer the needs of an ever-growing population.
  2. **Partnering with Circular Economy in Cement Industry (CECI)**
    - SCG has partnered with global construction leaders as one of the 14 founding members that aim to embed circular economy principles into construction sector with an efficient closed-loop network covering the entire process from designing, producing, installing to recycling. As part of the group, we work with customers to address waste issues, aiming to achieve CECI's mission of Material Waste Free in the future.
  3. **Partnering with Supalai Public Company Limited to launch "Recycled Concrete Road"**
    - SCG introduced the use of crushing waste concrete, e.g., concrete cubes, concrete floor as substitutes for natural aggregates for the manufacture of concrete used to construct roads in condominium projects. The initiative will be first presented to Supalai Veranda Rama 9 project. SCG strives to develop projects to better meet construction needs
  4. **Partnering with Sansiri Public Company Limited to launch "Construction Waste Reducing Project"**
    - SCG Introduced a waste reduction model taking place at the design stage for XT-Ekkamai with cast-in-place system walls, Elephant Brand's gypsum board and USG Boral's easy finish solution as replacements for the traditional brickwork system. The solution can reduce the use of materials in the installation process by 100%. The project began in July 2018 with plans to further expand to other Sansiri's projects.

5. Partnering with Magnolia Quality Development Corporation Limited (MQDC) and entering into a Memorandum of Agreement of “Cooperation in Circular Economy R&D to Recycle Leftover Building Materials Based on Circular Economy”
  - The goal is to research and develop the method to efficiently convert leftover building materials into new material.
- **Packaging Industry**
  1. Partnering with A Circular Economy for Flexible Packaging (CEFLEX)
    - SCG joined CEFLEX to take part in shaping the future direction of Flexible Packaging at a global stage for products, services, and solutions, including the development of packaging that is eco-friendly and sustainably sourced. Furthermore, becoming a member also helps heighten collaborative network among members and increases mutual business opportunities in the future to formulate a comprehensive plan for product development that is in line with the Circular Economy concept.
  2. Partnering with businesses to recycle used boxes and paper scraps:
    - Modern retail trade: Tesco Lotus, CP All, MAKRO, CPN, Family Mart, Villa Market, Super Cheap, CJ Express, AEON (Thailand).
    - Logistics: DHL, Lazada express
    - Banking and Finance: KBANK
    - Consumer goods: Thai Beverage, CP Business Group
    - Real estate development: Sansiri
    - Document storage management - Iron Mountain
    - Besides, the project also extends the use of paper by transforming them into Tesco Lotus paper bags. This year, it has collaborated with Tesco Lotus to convert plastic bottles into bags
  3. Partnering with S&P to improve the environment with circular economy, transforming green packaging to promote resource efficiency for customers
    - The collaborative effort promotes the use of recyclable boxes and bags or easily-recyclable materials, e.g., snack box, recyclable paper bag, “BIO” Fest food packaging, and Fest paper straw, to produce corrugated boxes as well as educating employees about sustainable packaging and supporting income-generating opportunities of community enterprises surrounding the plant. SCG encourages communities to use leftover paper tape from SCG’s manufacturing process to make attractive and durable gift baskets for S&P to deliver happiness to customers.

- Chemicals Industry

1. Partnering with Bill & Melinda Gates Foundation

- Developing the reinvented toilet where waste can be reused as soil improvement.

2. Partnering with IKEA

- Establishing a recycling center to motivate recycling behaviors. SCG helped design environmentally friendly materials for center's use.

3. Partnering with Starboard

- Developing environmentally friendly materials to feed the manufacturing of Starboard products

4. Partnering with Dow Thailand Group to launch the project "Recycled Plastic Road"

- Developing a technology that use plastics as substitute of asphalt to construct roads. The first prototype recycled plastic road was laid at RIL Industrial Estate. The project is being put forward by several organizations including **Amata Corporation Public Company Limited** with construction of recycled plastic roads within Amata City Industrial Estate in Chonburi, **SC Asset Public Company Limited** with construction of recycled plastic road in the project of Grand Bangkok Boulevard Ramintra-Seritha, and **CP All Public Company Limited** with "Recycled Plastic Road: 7 Go Green" project constructing recycled plastic roads in the surrounding areas of 7-eleven stores. The pilot construction will be carried out in two 7-eleven store branches in Sai Mai soi 3 and Rat Pattana soi 24.

5. Partnering with Bangchak Corporation Public Company Limited to develop "Greenovative Lube Packaging"

- Developing a comprehensive recycling model for used lubricant containers. With SCG's special grade resin formula, the containers will be transformed into post-consumer recycled resins that have the same quality as virgin plastics, a way to minimize new resource usage and waste reduction.

## 2.) Collaboration for Tackling Ocean Waste

- Global Collaboration

1. Partnering with Alliance to End Plastic Waste

- SCG is among the 30 founding members consisting of global organizations that provide education, expertise, experiences and resources of network partners to develop and promote initiatives to reduce and manage plastic problems, especially plastic debris in the oceans.

- **National Collaboration**

1. **Partnering with Thailand Public Private Partnership for Sustainable Plastic and Waste Management (Thailand PPP Plastic)** established by the Federation of Thai Industries, Plastics Group.

- SCG co-founded a public-private partnership and adopted Circular Economy concept to efficiently and sustainably manage plastic waste in Thailand with the aim to reuse 100% of plastic waste by 2027 and cut the amount of plastic waste no less than 50% by 2027

- **Collaboration with Government**

1. **Partnering with the Department of Marine and Coastal Resources** to develop “Floating Litter Trap Preventing Waste from Entering Oceans”

- In the testing phase, 5 litter traps are installed in the Rayong estuaries and canals in Samut Sakhon province. The floating litter traps will be added in 20 more locations by July 2019 which are expected to catch over 30 tons of waste between July to December 2019. Furthermore, the current prototype will be further developed into SCG Smart Litter Trap 4.0 that harnesses automation and solar power to increase performance efficiency. The initiative will also study how to extract more value from collected waste.

### 3.) Collaboration for Better Living Quality of People in Communities

- **Collaboration with Government**

1. **Collaborating with the Department of Marine and Coastal Resources and Small-scale Fisherfolk** to launch “Recycled Fish Home, Turning leftover PE100 Pipes and Plastic Waste to Fish Home”

- Developing and designing the prototype of Fish Home, an artificial marine habitat, using leftover PE100 pipes in the manufacturing process. Besides, marine debris and plastic waste in communities, i.e., bottle caps and plastic bags, are collected and used as materials for building “Recycled Fish Home.” The initiative does not only tackle plastic pollution, but also improves livestock and coastal marine biodiversity, and creates sustainable income for local fishers.

- **Collaboration with Communities**

1. **Collaborating with Rang Plub Community and Ban Pong district in Ratchaburi province**

- Working with Rang Plub community which resides near SCG's plant through environmental stewardship and community development, and increasing awareness on the Circular Economy to inspire behavioral change. SCG has also fostered community-level waste management, household waste sorting and resource usage based on the 3R approach which has helped create jobs, provide extra income, and create happiness in line with the

sufficiency economy philosophy. Besides, it has supported the community's effort to become the zero-waste community model and a learning center for comprehensive and efficient waste management in which other communities can adopt the method. All efforts have led Bang Plub community to the winning of 2nd place of Zero Waste Community Award presented by the Department of Environmental Quality Promotion.

- In addition, it has promoted “Ban Pong’s Community Waste Management Model” at Ban Pong district and raised public awareness and understanding of resource recycling through training sessions. SCG has worked with network partners to develop the model for waste management and efficient waste separation at source. SCG helped co-create the local administrative organization-based community model in each of 17 communities and studying the achievement the Zero Waste Community Award-winning Ban Rang Plab community.

## 2. Collaborating with Ban Sa district and Mueang Mai sub-district in Chae Hom district, Lampang province

- Launching “Waste Management Community Model Project” at Ban Sa district by sharing knowledge and raising awareness on waste sorting in the community. The project aims to encourage proper waste separation to create a healthier living environment for the community on top of generating extra income from waste separation. The concept has been expanded in collaboration with **the Office of Natural Resources and Environmental Policy and Planning** to drought-prone area Mueang Mai sub-district which aims to become Circular Economy Community of Chae Hom district in Lampang province.
- Launching “Mueang Mai Eco-City” at Mueang Mai district in collaboration with **the Office of Natural Resources and Environmental Policy and Planning** to develop the eco-city with sustainable environmental management and strengthen partnership with communities. SCG has formulated environmental management plans that are in line with the ecosystem to maintain natural and environmental balance, eliminating negative impacts caused in the future. The combined efforts aim to establish a sustainable natural resource and environmental management.

## 3. Collaborating with the communities surrounding the Chemicals Business’ plants in Rayong province. (Khot Hin 2 community, Khot Hin temple, Khot Hin Mittapap 42 school and Khao Phai Waste Bank)

- Like Waste Community is established by environmental-minded community residents in collaboration with the network of Home, Temple, School and Waste Bank to recycle and manage community waste in a sustainable manner. The “Home” serves as a place to gather recyclable items for waste separation at source. The “Temple” will host activities to raise

awareness of different types of plastic waste and encourage waste sorting on top of collecting scraps for sales. The revenue earned will be donated to the temple. The “School” will create a learning center about the Circular Economy to encourage green mindset among young people. The “Waste Bank” will be included in the “Ready Plastic” mobile application developed by Chemicals Business, SCG, to make recycling and waste trade more convenient and up to standard.

- Future plans: supporting Khot Hin 2 community to become a community participatory waste management model and encouraging the model adoption in other communities in Rayong province by 2024.
4. **Collaborating with schools and Mod Ta Noi community in Koh Libong sub-district, Kantang district in Trang province**
- Working with Ban Mod Ta Noi Subdistrict Health Promotion Hospital, Koh Libong sub-district Administration Organization, Ban Mod Ta Noi school, Save Andaman Network Foundation, Rajamangala University of Technology Srivijaya Trang Campus, Trash Hero Thailand. In 2014, the collaborative network initiated waste management in household and public space. The experiment on waste sorting took place in communities which then the local realized that some wastes are valuable. In 2016, the Friday House Cleaning project and Monthly Public Space cleanup have been implemented. The community has considered the ban of foam containers to appropriately manage waste in the community. This also includes expanding participation where the local people can voice their thoughts in the public forum. The efforts have led to the community agreement on waste management, the adoption of the 3R waste management approach, youth camp with the aim to establish integrated waste management for sustainability.
  - The efforts have made Mod Ta Noi community the model community which earned a range of awards including 2017 Foam-Free community from Department of Health and being shortlisted for 2019 Zero Waste Community Award organized by the Department of Environmental Quality Promotion, Ministry of Natural Resources and Environment.
  - Future plans: continuous support on promoting waste management in community and practices, upgrading waste management practices through educational trips and proper adoption.
5. **Partnering with schools and communities in Bang Sue district, Bangkok. (Ratchananthachan Samsen Witthayalai 2 School and Bhadungsit Pittaya School)**
- Raising awareness on the Circular Economy and Waste-Free School based on the 3Rs approach. The effort is to inspire behavioral change by sharing knowledge and carrying

out waste management practices in school. Setting the model for Waste Management at school toward sustainability and expanding the green mindset from school to household.

- As a result, the school provides different bins for waste separation. Students and teachers are becoming more aware of waste management. Over 70% of teachers use personal water containers to achieve a 100% reduction of single-use plastic. Schools also extract values from wastes by using organic waste as fertilizers for four vegetable plots and making 50 tree pots from rags
- Future plans: supporting the establishment of the learning center about integrated waste management and the launch CE Ambassador or Train the trainer in Ratchananthachan Samsen Witthayalai 2 School. Sharing knowledge about the Circular Economy and carrying out waste management practices in Bhadungsit Pittaya School.

#### 4.) Collaboration for Industrial Waste Management

- Collaboration with Government

- 1.) Partnering with the Industrial Estate Authority of Thailand (IEAT) to launch “Eco World Class with Circular Economy Concept”

- The goal is to eliminate industrial waste in Maptaphut, Rayong province with Gasification with Ash Melting, a technology from Japan, for the first time in ASEAN. This project can support waste material leftovers, both hazardous and non-hazardous, which is operated under the closed and well-controlled system according to the law. The solution is an alternative way to properly eliminate industrial waste and provide safety and eco-friendliness and community-friendliness. The system is expected to be in operation by the end of 2019.

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