



TPSA Project Sponsors Field Trip to Expose SMEs to Best Practices in Cleaner Production

Learning from experienced practitioners will further inspire SME partners to adopt and apply cleaner production practices.

Background

The TPSA project has been helping footwear and apparel SMEs in Indonesia improve their export potential in an environmentally sustainable way. Environmentally responsible production is an increasingly common requirement of international buyers and consumers.

TPSA's environmental program focuses on helping SME partners plan and implement cleaner production (CP) measures suited to their capacity and needs. The cleaner production training modules used by TPSA are drawn from the International Labor Organization's (ILO) SCORE (Sustaining Competitive and Responsible Enterprises) program, which has been implemented in many developing countries. TPSA's SCORE delivery partner is the Business Export Development Organization (BEDO). Starting in September 2017, the modules have been delivered in three in-class training workshops and four one-on-one on-site consultations/coaching sessions with 11 apparel and footwear SMEs. The most recent activity was a field trip for the SMEs to see and learn first-hand about cleaner production best practices.

Objectives

The field trip, facilitated by BEDO, took place on February 26, 2018. Prior to the field trip, in-class sessions were led by Dr. Rita Lindayati, TPSA Senior Environment Specialist; Dr. Purwanto, from the Environmental Science faculty at Diponegoro



Ms. Harini discussing upcycling projects conducted by some SMEs in Bali.

University; and Rachmi Fajar Harini of CV. Amiga, a clothing and accessory firm.

In her opening remarks, Dr. Lindayati stated that the field trip's objective was to provide real examples of, and further inspire the participants to adopt, cleaner production practices. Dr. Purwanto was invited as a key resource person from whom SME participants could solicit opinions and/or practical advice on the subject matter.

Ms. Harini presented her vision of a circular economy and discussed various actions that other like-minded companies have adopted to pioneer circular-economy practices in Bali. A circular economy, a key part of a broader green economy, aims to retain as much value as possible from raw materials and in-use products, then recover and



regenerate new products or materials at the end of each service life. It is the opposite of the traditional linear production-consumption pattern (take, make, use, dispose) which generates waste and pollutes the environment. Ms. Harini and a handful of other apparel companies have worked together to collect their production waste (such as parchment) and establish a creative team to transform the waste into other products (such as jewelry or handicrafts). They have also launched a "rent-way" project that allows customers to lease couture apparel. This is much cheaper for consumers than buying a product that is usually only worn once or twice. Ms. Harini encouraged the TPSA-sponsored apparel and footwear SMEs in Bandung to do the same, collaborating with one another and with their peers in Bali.

The field trip then visited two of TPSA's target SMEs: CV. Prisma Dwi Lestari (apparel and washed denim fabric) and PT. Roimondi Mandiri Utama, also known as McLacy (footwear). There were 21 participants (eight women and 13 men) representing six footwear and four apparel companies who participated in the TPSA-sponsored SCORE Cleaner Production program.

CV. Prisma Dwi Lestari

CV. Prisma Dwi Lestari is a half-hour drive from Bandung. The company is one of 11 SME partners who received TPSA-sponsored SCORE CP training and on-site coaching. It was selected as one of the two field trip destinations because it provides an example of good wastewater management. The company's primary business is denim laundering, which requires a lot of water. The denim is washed several times until the original dark blue color fades to the preferred light "washed-out" blue. The end products are sold domestically and to intermediaries of international buyers and retailers. The company's founder and owner, Lia Marlina, started the business in 2000 with 10 employees and two boilers (laundering machines). She now has 50 employees (38 permanent and 12 contract) and 10 boilers. Lia said running and growing a company as a single mother is not easy, but her family has helped with start-up capital and her mother helped considerably with childcare.

As a denim-washing business, the company produces a lot of chemical-loaded waste water, which



Waste water treatment ponds at CV. Prisma Dwi Lestari.

can have adverse environmental impacts if discharged untreated. The company's waste water treatment facilities comply with government environmental regulations. Unlike other industrial areas, the local government (Sukamenak) has enforced environmental regulations and designated the area a green industrial zone, free of polluting industries.

The company's waste water treatment facilities consist of several 10-by-5-metre ponds where waste water is treated with chemicals and enzymes, filtered, and treated again until considered neutralized and safe to discharge. This final treatment pond is populated by abundant tiny fish, whose proliferation is an indicator of good water quality (the fish would die otherwise). The company, however, does not discharge its treated waste water into nearby waterways; instead, it is used in the company's gardens to grow pine seedlings that are then sold (at a good price) when they reach one to two meters in height.

The company has also demonstrated significant improvement in the Five S practices (sort, set in order, shine, standardize, and sustain). Chemical jars are well-labelled and stored properly. Production rooms are now clutter-free. Each area of the production process has a clear demarcated line. A whiteboard is used to communicate the production status to all employees.

The company tour concluded with group discussions, where participants asked questions and shared their experiences. Dr. Purwanto praised the company's waste water management practices,



Dr. Purwanto briefing participants on waste water treatment methods, CV. Prisma Dwi Lestari.

which do not come cheap. Purchasing the water treatment equipment cost Rp 500 million, and monthly maintenance is Rp 4 million (for two full-time employees and chemical/enzyme purchases). These additional expenses result in a slightly higher denim price than that of other, more polluting, companies located along the Citarum river.

"The most important thing we have gained from the cleaner production program so far is the significantly improved communication between employer and employees and among employees. The importance of good communication cannot be overstated, as failed communication would lead to failed production."

—LIA MARLIANA
Director of CV. Prisma Dwi Lestari

The company's participation in the TPSA-sponsored SCORE CP program has produced important benefits, particularly enhanced communication between employer and employees as well as among employees. Before the changes were implemented, Lia described the tedious efforts that were involved in instructing every employee on any production-related matter. Since the Enterprise Internal Team (EIT) was established, she has focused on communicating with EIT members, who then transmit her messages to the other employees. This has helped improve efficiency. Lia

emphasized the importance of good communication in ensuring smooth production processes, with which the other participants agreed.

PT. Raimondi Mandiri Utama (McLacy)

The second company visited was PT. Raimondi Mandiri Utama (McLacy). This footwear manufacturer is approximately a 20-minute drive from Sukamenak. Founded in 1997, the family-owned company has 57 employees (39 permanent and 18 contract). The company's director, Hendry Lee, welcomed the field trip participants and guided the factory tour.

The company's cleaner production improvements, a result of implementing the TPSA-sponsored SCORE CP program, are impressive, and Hendry was eager to demonstrate. He showed pictures of the factory's "before" (gloomy and cluttered) and "after" (bright and organized) rooms. The changes to the physical production space and layout, part of the Five S practices, are striking. The new floor layout organizes every room and space according to its stage in the production process. For example, the drawing room is next to the cutting room, which is adjacent to the gluing room, which is next to the sorting and packaging room. This logical layout helps make employees' movements faster and more efficient, as they do not have to travel far to deliver their work to the next production stage.

Each room is now airy and free from clutter, providing employees with a safer and more comfortable workplace. In most rooms, parts of the roof have been replaced by transparent glass, allowing sunlight to come through. The big rooms, which originally had 40 to 45 standard fluorescent lights, now have only seven newly acquired energy-efficient LED lights. Previously crisscrossing electrical cables, a potential safety hazard, are now neatly organized and covered with cable protectors. The company has also purchased capacitors to ensure more efficient electricity usage, and has reduced its monthly bill from nearly Rp 7 million to just over Rp 2 million.

The company's cleaner production practices have extended from its production process to its products. Two footwear styles were designed with



environmental considerations in mind: one uses less materials, the other uses less chemical-loaded glue. To maintain footwear quality and sturdiness, stitches are strengthened using the best quality yarn. These styles fetch higher prices than the company's regular footwear. Hendry believes that environmentally friendly, good-quality footwear is a future trend. Although his footwear prices are higher than average, he does not have a problem finding buyers, because they trust his company's focus on quality.

"After participating in the cleaner production training, I showed all the training videos to our company owners. We all agreed that our production operation was very inefficient. However, it was a challenge to find the right time to plan and reorganize our operations and production space while production was ongoing. To be able to do this, we finally took the drastic measure of closing our operations for two weeks in January 2018."

—JAANTJE JW
Head of Accounting, PT. Maine Street

After the company tour, a group discussion was held. Hendry said the biggest initial cleaner production challenge was finding the time to change the factory floor layout without disturbing the ongoing production process. Mr. Jaantje JW, a representative from Maine Street footwear company, expressed a similar challenge, and revealed that his company took the drastic measure of closing its production operation for two weeks. Hendry shared a similar experience, whereby his company significantly curtailed its operations for a few weeks as it focused on reorganizing and rearranging the company's physical space. The cleaner and leaner production process, Hendry said, is not a one-time action. It is an ongoing process that needs to be practiced and continuously improved. Dr. Purwanto praised McLacy's CP measures and calculated that the company's financial investment would probably be recovered in one year. He also suggested McLacy consider switching to non-toxic glue as its next CP measure.



Sunlight streams in through transparent glass ceiling inserts, replacing fluorescent lights at PT. Raimondi Mandiri Utama (McLacy).

Conclusions

The field trip provided practical real-life examples to SME partners of the tangible benefits (as well as the challenges) of implementing the SCORE Cleaner Production program, and complemented the in-class training and on-site coaching.

The field trip and group discussions were invaluable to the SME participants, as they saw and learned first-hand about feasible ways a company can improve its efficiency, productivity, and environmental performance. A wide range of measures were presented, from those that cost nothing but offer quick results, such as good housekeeping (the Five S practices), to those requiring low investment, such as changing standard lights to sunlight and/or LED, and high-cost investments such as water-management facilities. Whatever measures a company decides to take, the commitment of the firm owner(s), as exemplified by Lia and Hendry, to allocate time and resources to such improvements is key to successful implementation. Equally important is a functioning and active EIT, including



management and operational staff members, to design and lead work plan implementation.

About the TPSA Project

TPSA is a five-year, C\$12-million project funded by the Government of Canada through Global Affairs Canada. The project is executed by The Conference Board of Canada, and the primary implementation partner is the Directorate General for National Export Development, Ministry of Trade.

TPSA is designed to provide training, research, and technical assistance to Indonesian government agencies, the private sector—particularly small and medium-sized enterprises (SMEs)—academics, and civil society organizations on trade-related information, trade policy analysis, regulatory reforms, and trade and investment promotion by Canadian, Indonesian, and other experts from public and private organizations.

The overall objective of TPSA is to support higher sustainable economic growth and reduce poverty in Indonesia through increased trade and trade-enabling investment between Indonesia and Canada. TPSA is intended to increase sustainable and gender-responsive trade and investment opportunities, particularly for Indonesian SMEs, and to increase the use of trade and investment analysis by Indonesian stakeholders for expanded trade

and investment partnerships between Indonesia and Canada.

The expected immediate outcomes of TPSA are:

- improved trade and investment information flows between Indonesia and Canada, particularly for the private sector, SMEs, and women entrepreneurs, including trade-related environmental risks and opportunities;
- enhanced private sector business links between Indonesia and Canada, particularly for SMEs;
- strengthened analytical skills and knowledge of Indonesian stakeholders on how to increase trade and investment between Indonesia and Canada;
- improved understanding of regulatory rules and best practices for trade and investment.

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