

**IMPACT SHEET:** Sustainable Future for Myanmar Food and Beverage Industries

## Catalysing Sustainable Water and Energy Management in Food and Beverage Industries in the Ayeyarwady River Basin



*Supporting small and medium sized enterprises (SMEs) in the Food & Beverage (F&B) sector to improve their resource efficiency while minimising negative environmental impact by training SMEs and working with regulators and local banks.*



## PROJECT BACKGROUND

Food and beverage (F&B) is the largest industry in Myanmar, accounting for almost 60 per cent of all companies. It is thus important to ensure that the sector develops in a responsible manner that respects and protects the natural environment. If not managed responsibly, it could have significant impacts on Myanmar's natural environment and undermine the country's long-term growth. Lessons from across Asia show us that, in the long term, cleaner production benefits both people and the industries themselves. So far, systematic barriers have prevented Myanmar's industries from adopting cleaner production practices. For example, of the 24,000 registered F&B companies in the country, less than 5% have a functioning wastewater treatment system. This is a huge concern. A 2018 WWF report found industrial wastewater pollution to be the biggest risk to the freshwater ecosystem in many of Myanmar's states and regions. Similarly, data suggests that achieving energy efficiency of 20-30% for industries is possible even with low cost measures. In order to address these systematic barriers, different stakeholders must work together to enable and empower industries to adopt cleaner production practices. Tha Bar Wa was financed under the EU SWITCH-Asia programme to enable 200 SMEs in the F&B sector in industrial zones in Yangon and Mandalay regions to establish sustainable energy and water management through supporting services and business structures, increased capacity and improved access to finance. This four and half years project (Feb 2018-July 2022) was collaboratively implemented by World Wide Fund for Nature (WWF), Myanmar Food Processors and Exporters Association (MFPEA) and the German Sparkassenstiftung for International Cooperation (DSIK, formerly SBFIC), to support cleaner production practices in the F&B industry.

## CHALLENGE

Over the last few years, Myanmar has become one of the fastest growing economies in the world. The Government of Myanmar has taken a Green Economy approach to development, indicating that the country would use the resources sustainability to achieve its development objectives. The management of waste water and investments in sustainable production and consumption are two of the eleven priority areas in the upcoming Green Economy framework.

The F&B industries, of which 66% are SMEs, belong to the largest water and energy consumers and polluters in the country. SMEs have limited understanding about sustainable water use and discharge practices in relation to the state and management of the catchment they operate in - with negative environmental impacts on the surface and groundwater resources. While regulations and licensing processes for industrial waste water management are in place on paper, SMEs have limited capacity and means to address the waste water problem. Furthermore, energy poverty in Myanmar is well documented, underpinning the need for energy efficiency and renewable energy. Factories experience roughly three blackouts per week, each averaging

about 9.6 hours. The variability of voltage severely damages the lifetime of machinery. The rises of energy prices are expected to further incentivise the efficient utilization of the resource.

## PROJECT OBJECTIVES

The project sought to contribute to the promotion of cleaner production in the Myanmar food and beverage (F&B) sector, improving the sector's environmental performance and contributing to a green economy. As a result of policies, business support structures, increased capacity and improved access to finance, SMEs in the F&B sector in Myanmar are enabled to adopt sustainable environmental management.

## TARGET GROUPS

- Ministry of Natural Resources, Environment and Conservation (MoNREC), the Ministry of Planning, Finance and Industry (MoPFI);
- Small- and Medium-sized Enterprises (SMEs) from the Food and Beverage (F&B) sector in Myanmar;
- The Myanmar Food Processors and Exporters Association (MFPEA) and other relevant business associations;
- Communities;
- Business intermediaries;
- Technology providers;
- Universities

## PROJECT ACTIVITIES

### Result 1 Policy

- Conduct scientific baselines for environmental characteristics of the F&B industry
- Develop a roadmap for implementing Emission Guideline on waste water discharge
- Facilitate private-sector and civil society consultations on water stewardship in five industrial zones
- Support Ministry of Industry in designing a policy promotion programme for energy efficiency in F&B industries
- Support the development of sector-specific Environmental Management Plan (EMP) guidelines and a checklist for the F&B sector
- Conduct consultation meetings on the sector-specific EMP checklist and guidelines with relevant (non-government) stakeholders
- Conduct workshops to train SMEs and local business consultants on how to develop EMPs
- Develop a code of conduct for F&B investors

## Result 2 Capacity & Market

- Organize awareness workshops on water and energy management for SMEs in F&B sector
- Conduct in-depth trainings on biological treatment and chemical-physical treatment
- Design and conduct in-depth and online trainings on energy efficiency and environmental management for SMEs and develop an app-based assessment and monitoring toolkit
- Create and strengthen a pool of local trainer and experts on water and energy management
- Carry out on site company assessments for better water and/or energy management options
- Provide assistance to SMEs to invest in cleaner production
- Strengthen the capacity of MFPEA to provide improved services on cleaner production to its members
- Procure basic laboratory equipment stationed at MFPEA to check water pollution for companies and training on the equipment
- Support MFPEA, members and business consultants to participate in sustainable production related conferences and study tours

## Result 3 Green Finance

- Scoping assessment of the status of green finance for SMEs in banking sector and selecting three pilot banks
- Review existing SME loan products and lending procedures in the selected pilot banks
- Conduct a regular exchange platform between banking experts and technical consultants
- Develop five standard business case scenarios of energy and water management investments
- Introduce a standard credit methodology for SME investments in green technology
- Provide trainings for loan officers: (1) Refreshment trainings on risk based SME lending and (2) Green finance trainings
- Provide joint trainings for SMEs on loan application and procedures
- Identify opportunities for innovative green/ cleaner production financing schemes

## Result 4 Replication

- Dissemination conference and communication to share results to initialize replication
- Develop a compendium of energy efficiency improvement opportunities for the F&B industries
- Support the integration of training content on energy and water management into curricula of educational institutions
- Development of an online tool/ information sharing portal for waste water management
- Set up a booth at Myanwater or Myanenergy forums
- Share lessons learned across South East Asia through the Switch Asia Network Facility

## PROJECT ACHIEVEMENTS

- Some goals were not achieved in full due to pandemic-induced and political disruptions. Improvements in the policy framework stayed behind the project partners' expectations.
- 91% of companies surveyed responded that the project had addressed their needs well.
- Over 300 F&B SMEs from three industrial areas participated in awareness-raising events and trainings. Of those surveyed, 97% confirmed they found the trainings useful above average or to a great extent.
- 76 F&B companies sought technical assistance on Cleaner Production (wastewater tests and counsel on treatment, energy audits, assistance with financing green investments). Of those surveyed, 80% confirmed this technical assistance had met their expectations above average or to a great extent.
- One photo story and three short films document companies' wastewater and energy investments, the benefits they derived from them and their owners' endorsement of CP, to spur interest and replication among peers.

## LESSONS LEARNED

1) Inter-ministerial struggles over competences and slow coordination with relevant ministries impeded the project team's efforts on improving the legal framework. This was addressed by frequently following up and seeking good relationships with focal persons at the ministries, albeit with limited success. 2) Hitting the country early in project year 3, the Covid pandemic made any face-to-face engagement with stakeholder hard to impossible for over a year, including trainings, factory audits and ministerial meetings. This was addressed through offering online classes, establishing strict hygiene routines for factory visits and bilateral meetings. 3) In February 2021, the military take-over of the power put direct engagement with government stakeholders to an end, which meant the end to working on an improved policy framework. The project team amended its work programme, giving more emphasis to strengthening private-sector drive for Cleaner Production and building on an assessment of COVID impacts on the F&B sector carried out in 2020.

Collecting data on companies' environmental performance takes time and prior engagement for trust-building, as factory-level data is sensitive. When aiming for policy change, enough time and staff resources need to be allocated to engaging with ministries (provided engagement with government is possible). It is important to stay abreast of changes in stakeholders' needs, to identify and address their greatest incentives for sustainable production. Beyond legal and economic incentives, this can include better relationships with neighbouring communities.





There is no sustainable future for Industries without water and energy management practices in place. Implementing those practices is not as difficult as most people think, it can even save money and gain great benefits. Play your part in achieving sustainability.

**Dr. Mu Mu Htay**  
WWF - Myanmar



## Long-term project sustainability

Since the lever of an improved policy framework and better enforcement had to be given up, the team focused on strengthening private sector capacities for, and commitment to, sustainable production. The **sector association MFPEA** (Myanmar Food Processors and Exporters Association) has been **capacitated to continue trainings and awareness raising** as well as **wastewater analyses**, and a new strategy been developed to **embed sustainable production** into its mission and core business.

A range of **support tools** has been developed **for companies** to assess and improve their environmental performance and enable them to achieve legal compliance, including: A sector-specific checklist and guidelines for the mandatory development of Environmental Management Plans; a digital app offering a hands-on environmental self-assessment and a toolkit on environmental management and Cleaner Production; a comprehensive web portal on environmental management and Cleaner Production under MFPEA's website; a compendium on energy efficiency in the F&B sector featuring a range of case studies as well as a roster of well-trained and experienced consultants offering energy audits and counsel on wastewater treatment and energy efficiency. **For banks**, extensive **training materials and ten business cases** have been developed and a number of employees been **trained as trainers** to increase capacities on green SME lending in the banking sector.

## Project contributions to Climate Change Mitigation and SDGs



The project has contributed towards **SDG 12** by promoting Cleaner Production, specifically sustainable water and energy management, in a key industrial sector in Myanmar, with a view to initiating uptake in other sectors of the manufacturing industry. It has offered training and tools for resource efficiency, particularly water and energy (Target 2; also **SDG 8**, Target 4); Encouraged F&B SMEs to adopt sustainable practices (Target 6); and Established a laboratory offering wastewater analyses for industry, created a pool of consultants on energy and wastewater management and developed an app for companies to conduct self-assessments of their environmental performance, thus strengthening Myanmar's technological capacity to move to sustainable production patterns (Target 9).

It also contributed to Climate Change Mitigation (**SDG 13**) by lowering emissions from the manufacturing industry in Myanmar and putting structures and tools in place for greater uptake of energy management practices and investments into energy efficiency. The project team supported SMEs from the F&B sector to become more energy efficient. A total of 54 companies have been trained on industrial energy efficiency, and the team provided 22 companies with energy audits including detailed recommendations on energy efficiency and renewable energy, offered technical assistance in understanding the audits and possible investment scenarios and supported one company with applying for grant support towards a set of energy efficiency measures. During the project life, 14 companies have invested into energy efficiency measures which in one case has resulted in a 20% reduction of energy demand.

In addition to SDGs 12 and 13, the project contributed to: Improving labour safety through including ILO labour standards into its awareness-raising curriculum and reducing industrial pollution (**SDG 3**, Target 9); Reducing industrial water pollution for the benefit of neighbouring communities and ecosystems in the Ayeyarwaddy basin (**SDG 6**, Targets 3 & 6); and Improving SMEs' growth and access to financial services (**SDG 8**, Target 3, **SDG 9**, Target 3).

# Impacts at a Glance

<b>Environmental Impact</b>	<ul style="list-style-type: none"> <li>• Production processes in roughly 25 companies from the F&amp;B sector in Myanmar have become more energy-efficient and less water-polluting</li> </ul>
<b>Social Impact</b>	<ul style="list-style-type: none"> <li>• Odour nuisance reduced</li> <li>• Water quality improved, likely with a positive impact on health (in communities using river as main water source)</li> </ul>
<b>Climate Benefits</b>	<ul style="list-style-type: none"> <li>• Replacement of old boilers and other inefficient machinery</li> <li>• Fixing of leaks, e.g. in steam systems</li> <li>• Better insulation of heat-using systems</li> <li>• Changes in use/behaviour, e.g. switching off lights and other equipment when not used</li> </ul>
<b>Green Finance</b>	<ul style="list-style-type: none"> <li>• Match-making events between SMEs and local banks</li> <li>• Support to SMEs in applying for Responsible Business Fund grant support</li> <li>• Green commercial credit products for SMEs</li> </ul>
<b>Target Group Engagement</b>	<ul style="list-style-type: none"> <li>• Business associations, companies, government ministries, city committees, industrial zone committees, professional associations, environmental consultants, universities, media, communities, local and international NGOs</li> <li>• Awareness-raising and training, study tours, technical and financial advice on CP measures, technical support with policy development and law enforcement (through studies, capacity-building, stakeholder consultations; note: not completed due to coup), consultation on needs and views, dissemination of information, cooperation on wastewater analysis and treatment, energy audits and efficiency measures</li> </ul>
<b>Policy Development</b>	<ul style="list-style-type: none"> <li>• Bilateral consultations with ministries on policy improvement and enforcement</li> <li>• Multi-stakeholder consultations on industry and public/community needs regarding law enforcement</li> <li>• Recommendations on industrial energy efficiency policy, based on a regional comparison of policy frameworks and lessons learned</li> <li>• A sector-specific checklist for the mandatory development of Environmental Management Plans (EMPs), as a blueprint on how to make the official generic checklist template more applicable to different industrial sectors</li> </ul>
<b>Europe-Asia Cooperation</b>	<ul style="list-style-type: none"> <li>• 2020: Joint workshop with SWITCH-Asia cofunded SMART project on government and industry needs regarding EMPs</li> <li>• 2020: multi-stakeholder EMP Working Group meeting hosted on behalf of the Tha Bar Wa -SMART – UNEP partnership</li> <li>• 2021: Match-making event between various green tech suppliers (incl. internat./nat.) and SMEs</li> <li>• 2018-22: Miscellaneous awareness raising events and trainings for SMEs on Cleaner Production, water and energy management, Green Finance</li> <li>• 2019 ongoing: Launch of a Cleaner Production online repository on the website of a business association</li> <li>• 2019-20: Trainings on CP investments for bank staff charged with assessing loan applications</li> <li>• 2020: Comparative study on industrial energy efficiency policies in SE Asia</li> <li>• 2019-20: Training of trainers on a) energy auditing and industrial energy efficiency and b) wastewater analysis and treatment, for a pool of local consultants</li> <li>• 2022: Study tour for interested companies from Mandalay to visit industrial energy efficiency and wastewater treatment measures in Yangon</li> <li>• 2018-21: Lessons learned from the project shared with SCP practitioners at SwitchAsia annual conference and networking event and at a session dedicated to agro-based green finance</li> </ul>



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## DURATION

Feb 2018 - July 2022



## PARTNERS



World Wide Fund for Nature (WWF)  
Germany



WWF- Myanmar



German Sparkassenstiftung  
for International Cooperation  
(DSIK)



Myanmar Food Processors  
and Exporters Association  
(MFPEA)



## CONTACT

WWF Germany  
Marianne Henkel  
Reinhardtstr. 18 | 10117 Berlin, Germany  
Telephone: +49 30 311777-276  
Email: [marianne.henkel@wwf.de](mailto:marianne.henkel@wwf.de)  
Website: <https://www.wwf.org.mm/en/thabarwa/>

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