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giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

In cooperation with




Capacity Development and Legal Instruments with the Department of Environment (DoE)



“My highlight was a technical visit to Japan - focused on hazardous waste management. They have an electronic manifest system through which all industries report their industrial waste, and it is shared between the generator of waste, the transporter and the disposer. This is not only beneficial for accuracy of the waste management, but also relevant in times of transition towards more recycling or even a circular economy: to be able to identify potential feedstock for new production processes. We went to Japan with representatives from the Ministry of Industries, Ministry of Environment, Forest and Climate Change, and the Department of Environment of Bangladesh. This experience left a lasting impression on me and reinforced the importance of collaboration among government stakeholders in Bangladesh. It underscored the urgent need to establish a robust legal framework and state-of-the-art facilities for Treatment, Storage, and Disposal Facility (TSDF) in our country.”

- Md Yousuf Abdullah Khan



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- 200+ field officers from DoE trained
 - 5 knowledge products, including Effluent Treatment Plant Design and general Inspection Manuals, have been endorsed by DoE
 - 6 industries have installed monitoring devices that report to a DoE based Online-ETP-Monitoring system
 - Exposure visits to the European Chemicals Agency in Helsinki and to the European Commission in Brussels were arranged. This contributed to the 2 draft regulations, Chemicals Management Rules and Hazardous Waste Management Rules

In Bangladesh, the textile and leather industries have long grappled with the challenge of disposing hazardous waste sludge, despite the existence of guidelines. However, the absence of feasible (or economically viable) solutions and legal enforcement leaves these industries in a precarious position.

The textile and leather industry's struggle with waste disposal has served as a catalyst for a broader conversation that extends to other sectors, including ship recycling. The realisation that hazardous waste disposal issues are not isolated to a single industry has sparked a collective sense of urgency among stakeholders.



The approaches in project implementation that contributed to successful implementation were

1. Enhancing the **coordination between different stakeholders**.
2. Connecting with **international expert knowledge** to advice on technical questions related to the technical parts of drafting legal instruments and manuals, and
3. Piloting at six industries an **Online Monitoring** of the quality of the outtake of Effluent Treatment Plants.



**Coordination between
different stakeholders**



**International expert
knowledge**



Online Monitoring

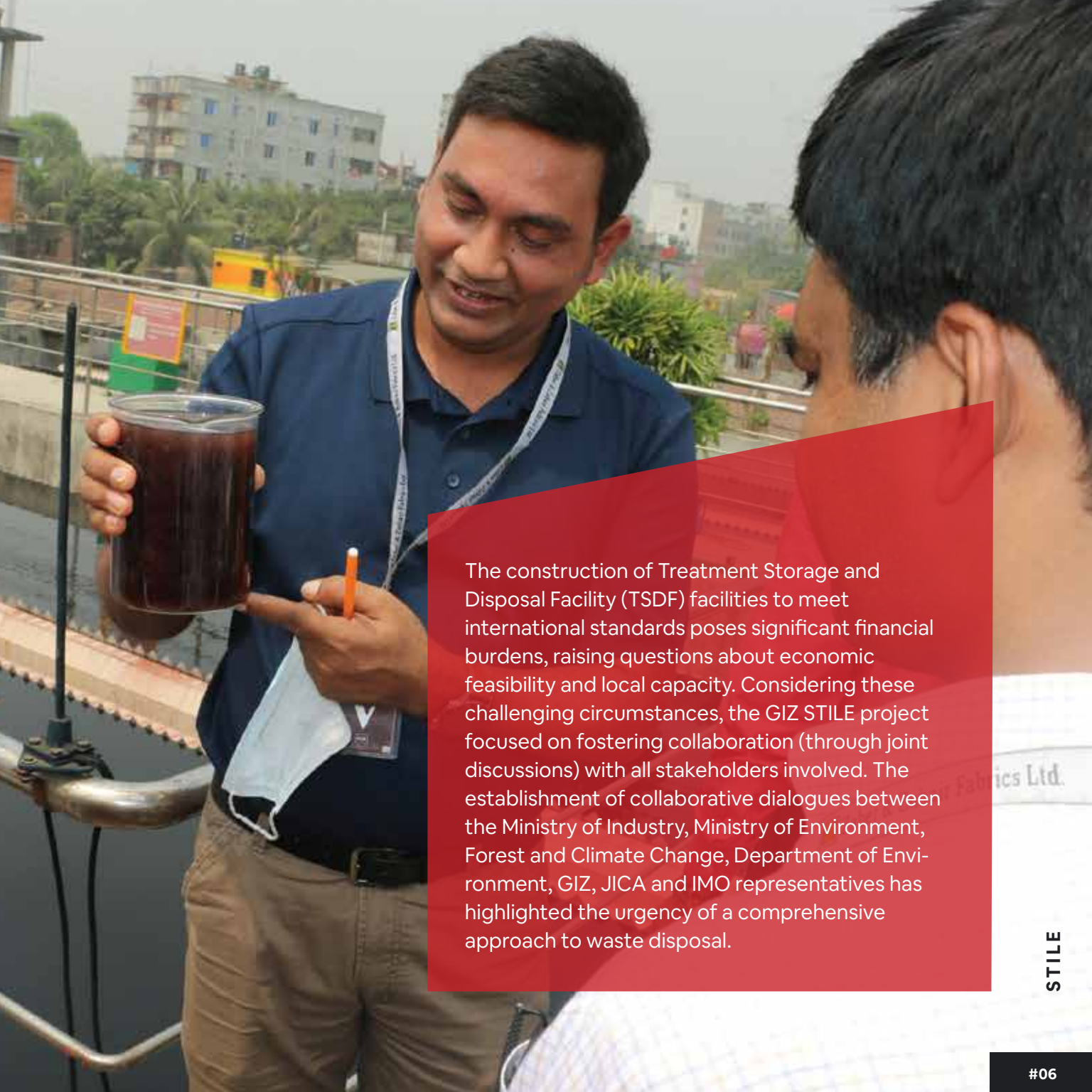


Coordination on the Topic of Hazardous Waste Management

The economic feasibility and technical challenges associated with waste disposal present significant hurdles, impeding progress towards sustainable practices. The challenge lies in aligning the requirements of international conventions, such as the Basel and Hong Kong Conventions, with the local context of Bangladesh's regulatory reforms.

Previous efforts became more relevant when Bangladesh ratified the Hong Kong Convention for the Shipbreaking industry. The International Maritime Organization (IMO) and the Government of Norway, as well as Japan, are working with the Ministry of Industries, to enhance the compliance of the ship recycling industry.

This, certainly, includes the challenge of managing the hazardous waste. Now, there were two industries interested in upgrading the existing ecosystem.



The construction of Treatment Storage and Disposal Facility (TSD) facilities to meet international standards poses significant financial burdens, raising questions about economic feasibility and local capacity. Considering these challenging circumstances, the GIZ STILE project focused on fostering collaboration (through joint discussions) with all stakeholders involved. The establishment of collaborative dialogues between the Ministry of Industry, Ministry of Environment, Forest and Climate Change, Department of Environment, GIZ, JICA and IMO representatives has highlighted the urgency of a comprehensive approach to waste disposal.



Anticipating the relevance of inspecting properly the industrial effluent treatment plants, the STILE project also cooperated with the DoE to enable its Dhaka Office based Laboratory to get the accreditation to validate tests performed at the industrial sites - the ISO/IEC 17025 standards set by the Bangladesh Accreditation Board (BAB).

Lab accreditation is the formal recognition of technical competence for specific tests or measurements, ensuring that laboratories meet international and domestic standards, in our case with the specific interest on wastewater discharge. To obtain this is crucial for ensuring the reliability and accuracy of laboratory results for regulatory compliance and legal proceedings.



Compliance with international standards, such as the EU's REACH (Registration, Evaluation, Authorisation, and Restriction of Chemicals), is crucial for maintaining market access and meeting global standards

Connection with International Experts

Growing expertise regarding some of the work processes is related to the combination of theoretical knowledge and practical experience. While the DoE has a highly technical team of officers, not all technical elements are frequent in Bangladesh to allow the field officers to obtain the required experience. On the evaluation of designs of Effluent Treatment Plants, for example, or even on their inspection, the contribution of experts from India and Germany enriched the discussions and drafting of Manuals, Guidelines and Checklists.

For the drafting of Chemicals (Management and Safety) Rules, the visit to the European Chemicals Agency in Helsinki provided insights into what follows regulating specific administrative steps to manage Chemicals. This led to a realistic balance between the ambitions and the administrative potential for the implementation. It was also agreed that Regulatory Impact Assessments would be developed before forwarding the draft rules to the legislative process, to be able to anticipate the financial and bureaucratic implications – and, thus, anticipate (and alert on) eventual implementation challenges.

National experts, both on the technical side and on legal topics complimented the advisory package implemented by the STILE project. It is an historical anecdote that the current Environmental Advisor at the Interim Government assessed the environmental legal framework, which led to the more targeted interventions of the STILE project.



Online ETP-Monitoring System

The Department of Environment has the ambition to enhance its delivery on compliance and pollution reduction. One idea that emerged is to start a piloting of monitoring the outtakes of Effluent Treatment Systems in the textile industry. Measuring requires a significant investment that neither the industry nor the Government had the funds to implement. Considering the confirmation of a several hundreds of millions of USD worth World Bank funded project that could scale this, the STILE project responded to the DoE request to prepare this system with its technical and operational center and 6 pilot industries.

At the end of the project – real time information is being sent to DoE Headquarters (and video footage from a CCTV system allows to validate the visual confirmation). Now, the World Bank ´s BEST Project will amplify the outreach to almost 20 industries. And while the future of this process is shaky, considering the heavy investments required, the DoE is optimistic that if the first 30 industries proof this to be a thorough measurement tool, it could make it mandatory for all industries that are obliged to run ETPs.



This process confirmed that it is possible to measure the specific outtakes of potentially contaminating industries.

- Cooperation will continue under the STILE II project with the IMO/Norway and JICA driven elements.
- Draft rules will continue to be worked on under STILE II.
- Online ETP-Monitoring will be taken up by the World Bank 's BEST project.

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**Published by:**

Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

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As at
Dhaka 2024

Design

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Photo Credit

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