

THE WAY FORWARD

Building partnerships for sustainable environmental solutions



Overview

The BMUV – Export Initiative Environmental Protection

- **Overall objective:** Support sustainable and favourable conditions for the adoption of environmental, resource-efficient and climate protection technologies in selected partner countries
- **Partner countries:** Jordan, Thailand, Malaysia, Indonesia, Ukraine, India, Egypt and global modules
- **Commissioned by:** The German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV)
- **Project duration:** 2019 to 2023

Global environmental and climate protection can only succeed if the required infrastructure as well as legal, political and administrative framework conditions are in place.

The “Export Initiative Environmental Protection”, launched in 2016 by the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV), aims at exporting know-how available in Germany to support sustainable development efforts worldwide, to promote technology applications and harmonized environmental standards, and finally, to create suitable conditions for the successful and sustainable use of green technologies “Made in Germany”.

The Export Initiative projects make an important contribution to protecting the environment, improving the efficient use of resources and reducing greenhouse gas emissions, in line with the sustainable development goals (SDGs) of the 2030 Agenda.

GIZ and global impact

GIZ implements the “Export Initiative Environmental Protection” projects worldwide on behalf of the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV).

Project measures focus on building up technical and institutional know-how as well as laying the groundwork for the introduction and use of environmental and climate protection technologies. To help make a long-lasting contribution to achieving the UN’s sustainable development goals (SDGs), the project focus is on knowledge transfer, pilot projects, sustainable business models, capacity building, environmental education and awareness raising.

The country measures are implemented in cooperation with bilateral projects of GIZ in the partner countries but also in global modules. The activities supported are embedded in the strategies of the target countries. They contribute to solving key environmental problems, such as poor waste management, air and water pollution as well as supporting infrastructures for sustainable urban development.

Overview of project activities

Table of Contents

Egypt Extended producer responsibility in the tourism sector →

Global Cooperation with the Global Solutions Initiative →

India & MENA Region Compendium of Best Practices and Technologies for Industrial Wastewater Treatment →

India Environmental standards in the textile sector →

India Reduction of Air Pollution in Three Indian Cities (Surat, Nagpur, Pune) →

India Management of Organic Waste in India →

Jordan Introduction of an Extended Producer Responsibility system for packaging →

Thailand, Indonesia, Malaysia (CAP SEA) Collaborative Action for Single-Use Plastic Prevention in Southeast Asia →

Ukraine Improving regional cooperation on waste and resource management in the Poltava region →



Extended producer responsibility in the tourism sector



Background

With a population of around 100 million inhabitants, Egypt has an economy dependent on agriculture, tourism and cash remittances. The service sector provides most of the employment for the working population and contributes to the largest share of Egypt's gross domestic product (UNDP, 2018)¹. The tourism sector on the Red Sea and the Nile also makes a significant contribution to Egypt's economy.

With more than 20 million tonnes of municipal solid waste generated each year, the existing waste management infrastructure and services are unable to deal with these increasing amounts. Given that around 60 per cent of the waste generated is collected and less than 20 per cent of this is properly disposed of or recycled, a considerable proportion of waste ends up in canals, rivers, roads and in open areas, causing negative environmental and health impacts. This also has negative consequences in economic sectors, especially tourism (GIZ, 2020)².

Aim of the cooperation



The aim is to reduce uncontrolled waste disposal by supporting recycling management and promoting an extended producer responsibility (EPR) system for packaging waste by preparing the framework and building blocks to ensure its successful operational launch.

The project contributes directly to the Sustainable Development Goal on sustainable cities and settlements (SDG 11) specifically target 11.6: "By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management".

¹ <http://hdr.undp.org/en/countries/profiles/EGY>

² <https://www.giz.de/en/worldwide/22230.html>

What we do

- **Stakeholder Dialogues:** We foster stakeholder dialogues on the implementation of an EPR system for packaging waste.
- **Pilot Projects:** We develop pilot measures to introduce an EPR system.
- **Knowledge Management:** We process results and experiences of the pilot projects and disseminate the findings to relevant public and private stakeholders.

Key results

- A baseline study³ was prepared by a team of international consultants

3 [“Extended Producer Responsibility Scheme for Packaging Waste in Egypt”](#)

- A Desk study for EPR Registry was conducted and EPR Registry requirements have been developed
- A Case study report for Hurghada and Heliopolis was drafted and is under review

Project partners

- Egyptian Ministry of Environment, Waste Management Regulatory Authority (WMRA)
- Black Forest Solutions GmbH
- Landbell AG



Imprint

Published by
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Global Project
“Support of the Export Initiative Environmental Protection” (BMUV)
project duration 2019 to 2023

Köthener Str. 2
10963 Berlin / Germany
T +49 (0) 30 338 424 646
E markus.luecke@giz.de
I www.giz.de

More information
<https://www.giz.de/en/worldwide/78869.html>

Edited by
Markus Lücke
Dr. Vanesa Rodriguez Osuna
Thilanka Seneviratne

Design
Crolla Lowis GmbH, Aachen / Germany

Printed by
Braun & Sohn, Maintal, Germany
Printed on FSC-certified paper

Photo credits
© BEE Media Productions & Unsplash

As at
June 2022

GIZ is responsible for the content of this publication.

On behalf of
Federal Ministry for the Environment,
Nature Conservation, Nuclear Safety and Consumer Protection (BMUV)

Stresemannstraße 128 - 130,
10117 Berlin / Germany
I www.exportinitiative-umweltschutz.de

On behalf of:



Federal Ministry
for the Environment, Nature Conservation,
Nuclear Safety and Consumer Protection

of the Federal Republic of Germany

Cooperation with the Global Solutions Initiative



Background

The Global Solutions Initiative (GSI) is a global, non-profit and non-partisan platform for ideas. It advances global economic, environmental, and social prosperity by connecting thought leaders and decision makers, visionaries and pragmatists. Headquartered in Berlin, the Initiative proposes research-based policies to the G20, the G7, and beyond. Annually, it hosts the Global Solutions Summit in Berlin, a festival of ideas for better global governance.

The policy recommendations and strategic visions are developed through a disciplined research program in collaboration with leading think tanks and scientific organizations and refined in policy dialogues among decision-makers from academia, politics, business and civil society. Complementary to G7/G20 thematic priorities, concepts on global challenges and issues such as circular economy and sustainable supply chains are developed with renowned think tanks. The resulting policy recommendations also aim to be relevant for emerging and developing countries.

The Global Solutions Summit is the world's premier forum for transforming research-based insights into policy recommendations for the G20 and the G7. Its goal is better global governance for the common good. This high-level meeting brings together senior government officials with top-level academic researchers, NGO leaders, and international CEOs. Among many others, the Summit has been attended by German Chancellor Olaf Scholz, former German Chancellor Angela Merkel, Development Minister Svenja Schulze, Environment Minister Steffi Lemke, the Secretary General of the United Nations (UN) António Guterres, and EU Commissioner Frans Timmermans.



Aim of the cooperation



The objective of this cooperation is to disseminate environmental technology solutions from the GIZ global project "Support of the Export Initiative Environmental Protection" (GV ExI), of the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV), and thus support sustainable

transformation processes outlined in the Paris Climate Convention and the 2030 Agenda.

The module makes a direct contribution to fostering global partnerships for sustainable development (SDG 17), enhancing North-South, South-South and triangular regional and international cooperation (target 17.16) on access to technology and knowledge sharing. The module is complemented by multi-stakeholder partnerships for the mobilization and exchange of knowledge, expertise on technologies and financial resources, to support all member countries – especially emerging and developing countries - in achieving key sustainability goals.

What we do

- **Policy dialogues:** Together with our international partners, we analyze mechanisms embedding circularity in various project sectors and devise context-sensitive strategies for localized implementation, while inspiring a compelling narrative which feeds into the G/T20 and G/T7 processes. The results are made available via a dedicated GSI webpage and the Greentech Knowledge Hub.
- **Knowledge management:** We bring the results and experiences from partner countries into the G20 process via policy dialogues, Global Solutions Summits, and the INTERSECTING e-publication.
- **Policy recommendations:** We analyze policy-relevant experience gained from global project partners and policy dialogues. We also draft policy recommendations to scale up the project's impact.
- **Visibility:** Our activities' aim is to expand the visibility of BMUV's Export Initiative Environmental Protection and its results within the scope of the G/T20 and, since 2022, the G/T7 as well.



Imprint

Published by
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Global Project
"Support of the Export Initiative Environmental Protection" (BMUV)
project duration 2019 to 2023

Köthener Str. 2
10963 Berlin / Germany
T +49 (0) 30 338 424 646
E markus.luecke@giz.de
I www.giz.de

More information
<https://www.giz.de/en/worldwide/78869.html>

Edited by
Markus Lücke
Dr. Vanesa Rodriguez Osuna
Thilanka Seneviratne

Design
Crolla Lowis GmbH, Aachen / Germany

Printed by
Braun & Sohn, Maintal, Germany
Printed on FSC-certified paper

Key results

- Terms of the cooperation with the GSI have been defined and current work activities are implemented.
- Series of the "Circular Economy Solutions Dialogues" (CESD) have been designed and carried out on three main topics: prevention of single-use plastics; circular economy and global supply chains as well as "urban metabolism" (material cycle in cities). The experiences of the global project EXI activities have been continuously integrated into these policy dialogues.
- Circular Economy and Plastics (May 2021 – June 2021)
- Circular Economy and Global Value Chains (October 2021 – January 2022)
- Circular Economy and Urban Metabolism (March 2022 – June 2022)
- A Sounding Board for the CESD has been established and meets on a regular basis.
- Three volumes of the GSI e-publication INTERSECTING were published on the following circular economy topics:
 1. plastic value chains
 2. global value chains
 3. urban metabolism
- The books contain contributions from the international members of the project and CESD participants.
- The Global Solutions Summit 2021 was successfully executed, with two expert panels communicating the global project's main theme of circular economy to an international audience. The project's ideas reached a wider audience at the Global Solutions Summit 2022, where three circular economy-related sessions were convened.

Project partners

- Global Solutions Initiative

Photo credits

© Global Solutions Initiative/ Tobias Koch, Global Solutions Initiative/Rolf Schulten & Unsplash

As at
June 2022

GIZ is responsible for the content of this publication.

On behalf of
Federal Ministry for the Environment,
Nature Conservation, Nuclear Safety and Consumer Protection (BMUV)

Stresemannstraße 128 - 130,
10117 Berlin / Germany
I www.exportinitiative-umweltschutz.de

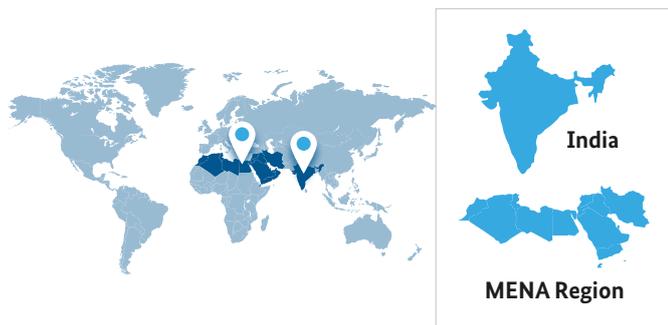
On behalf of:



Federal Ministry
for the Environment, Nature Conservation,
Nuclear Safety and Consumer Protection

of the Federal Republic of Germany

Compendium of Best Practices and Technologies for Industrial Wastewater Treatment



Background

Industries require an abundant supply of fresh water for cooling products or equipment and other processes. The wastewater from these industrial processes contains high concentrations of specific pollutants. If released untreated or inadequately treated, this wastewater causes serious environmental pollution associated with risks for public health. The solutions, technology, and knowledge around the treatment, recycling, and reuse of industrial water are available, but not widespread in many regions of the world.

Decision makers in the partner countries (India and in the MENA region) need solid criteria to assess and apply the best available industrial water treatment technologies which consider both ecological and economic aspects.

Aim of the cooperation



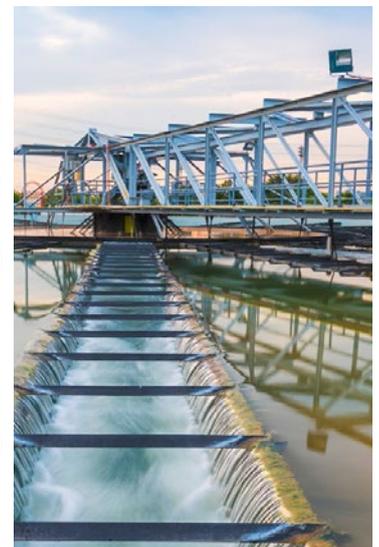
The aim was to develop a guidance document for the identification and application of Best Available Techniques (BAT) for the management and treatment of industrial wastewater in key industrial sectors relevant for the target countries (India and the MENA region).

This module contributed directly to the Sustainable Development Goal 6 on clean water and sanitation, specifically target 6.3: “By 2030, improve water quality by reducing pollution, eliminating dumping, and minimising release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally”.

What we do

- **Technologies for Industrial Water Treatment:** The German Water Partnership e.V. (GWP) developed a compendium of technologies for industrial water treatment in India and the MENA region⁴, which included the compilation of knowledge from project partners in their network.
- **Knowledge Management:** GWP also organised workshops to exchange experiences, highlight opportunities for future collaboration and network with relevant project partners within the field of industrial wastewater treatment in Germany and the target regions.
- **Multipliers:** Dissemination of knowledge generated in the industrial water compendium to relevant public and private institutions.

4 <https://greentechknowledgehub.de/publications/industrial-water-compendium-guide-decision-makers-industrial-wastewater-management> (available in English, French, German and Arabic)



Key results

- GWP conducted two high-level engagement workshops on experiences in industrial wastewater treatment technologies in India and in the MENA region in September 2020
- In November 2021, two workshops took place to present the industrial water compendium

Project partners

- German Water Partnership e.V.

Imprint

Published by
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Global Project
“Support of the Export Initiative Environmental Protection” (BMUV)
project duration 2019 to 2023

Köthener Str. 2
10963 Berlin / Germany
T +49 (0) 30 338 424 646
E markus.luecke@giz.de
I www.giz.de

More information
<https://www.giz.de/en/worldwide/78869.html>

Edited by
Markus Lücke
Dr. Vanesa Rodriguez Osuna
Thilanka Seneviratne

Design
Crolla Lowis GmbH, Aachen / Germany

Printed by
Braun & Sohn, Maintal, Germany
Printed on FSC-certified paper

Photo credits
© GIZ & Unsplash

As at
June 2022

GIZ is responsible for the content of this publication.

On behalf of
Federal Ministry for the Environment,
Nature Conservation, Nuclear Safety and Consumer Protection (BMUV)

Stresemannstraße 128 - 130,
10117 Berlin / Germany
I www.exportinitiative-umweltschutz.de

On behalf of:



Federal Ministry
for the Environment, Nature Conservation,
Nuclear Safety and Consumer Protection

of the Federal Republic of Germany



Environmental standards in the textile sector



Background

Industrial growth plays an important role in India's development strategies. The biggest employers in India are concentrated in the textile sector. It is a water-intensive industry associated with high pollution due to the wastewater and wastes generated and the widespread use of chemicals, which need to be addressed. Many of the chemical agents used can have long-lasting negative effects on the environment.

In the European Union (EU), the "Best Available Techniques Reference Documents" (BREFs) for textiles and other industry sectors provide standards and guidance to authorities on how to develop environmental directives as well as to industries on how to comply with the directives. The experiences gathered in the EU, particularly in Germany, will be used for developing a similar BREF document for the textile sector in India.

Aim of the cooperation



The aim is to develop BREF documents adapted to the Indian context to strengthen compliance with environmental legislation in the textile sector and to limit its associated pollution. The implemented measures in this module support the initiatives of the Indian government and contribute among others directly to the Sustainable Development

Goals on building resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation (SDG 9), specifically target 9.4: "By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities".

What we do

- **Preparation of BREF Documents:** We support the process of developing a BREF document for the textile sector in India, at national level and in the State of Gujarat in cooperation with experts of the Federal Environment Agency (UBA) in Germany.
- **Knowledge Management:** We promote information exchange among all relevant authorities and stakeholders.
- **Capacity Development:** We enable capacity development measures for industries and our partners to raise awareness on the BREF process and disseminate the knowledge accrued.

Key results

- A guideline was developed on procedures for the preparation of environmental standards that promote environmentally friendly production processes tailored to the Indian context, in close cooperation with the responsible authorities and the UBA

- Training for partner's experts on the content and use of the guide was developed and carried out
- In cooperation with the UBA, a first draft of the textile BREF Gujarat was finalized and will be presented to the relevant authorities

Project partners

- Indian Ministry of Environment, Forest and Climate Change
- Indian Central Pollution Control Board
- Gujarat Pollution Control Board



Imprint

Published by
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Global Project
"Support of the Export Initiative Environmental Protection" (BMUV)
project duration 2019 to 2023

Köthener Str. 2
10963 Berlin / Germany
T +49 (0) 30 338 424 646
E markus.luecke@giz.de
I www.giz.de

More information
<https://www.giz.de/en/worldwide/78869.html>

Edited by
Markus Lücke
Dr. Vanesa Rodriguez Osuna
Thilanka Seneviratne

Design
Crolla Lowis GmbH, Aachen / Germany

Printed by
Braun & Sohn, Maintal, Germany
Printed on FSC-certified paper

Photo credits
© GIZ & Unsplash

As at
June 2022

GIZ is responsible for the content of this publication.

On behalf of
Federal Ministry for the Environment,
Nature Conservation, Nuclear Safety and Consumer Protection (BMUV)

Stresemannstraße 128 - 130,
10117 Berlin / Germany
I www.exportinitiative-umweltschutz.de

On behalf of:



Federal Ministry
for the Environment, Nature Conservation,
Nuclear Safety and Consumer Protection

of the Federal Republic of Germany



Reduction of Air Pollution in Three Indian Cities (Surat, Nagpur, Pune)



Background

Increasing air pollution is becoming a serious threat to human health and the environment in many Indian cities. In 124 Indian cities, air pollution levels have exceeded air quality standards continuously over the last five years and are therefore declared as non-attainment cities. The main sources of air pollution in Indian cities include vehicle exhaust, industrial and construction emissions, waste burning, crop residue burning and road dust.

The Indian government launched the National Clean Air Programme (NCAP) in January 2019 through its Ministry of Environment, Forest and Climate Change (MoEFCC) as a national level strategy to reduce in the identified 124 cities 20-30% of particular matter fine particles (PM2.5) and coarse particles (PM10) pollution concentration by 2024 as compared to 2017¹.

Aim of the cooperation

The aim is to strengthen the capacities of authorities in three selected Indian cities to ensure effective implementation of India's National Clean Air Programme. The implemented measures in this module support the initiatives of the Indian government and contribute to the UN Sustainable Development Goals on fostering good health and well-being (SDG 3), making cities and human settlements inclusive, safe, resilient and sustainable (SDG 11) and on taking urgent action to combat climate change and its impacts (SDG 13).

¹ National Clean Air Programme (NCAP). 2019. Central Pollution Control Board. Ministry of Environmental Forests and Climate Change, The Government of India



What we do

- **Portal for Regulation of Air pollution in Non-Attainment cities (PRANA²):** We support and develop a national portal for programme management and monitoring of the National Clean Air Programme for MoEFCC and the Central Pollution Control Board (CPCB), which helps the tracking of the physical as well as the financial status of preparation and implementation of the clean air action plans through a robust intranet and dashboards, besides disseminating up-to-date information to the public.
- **Methods and guidelines:** We support the development of methods, guidelines and reference documents for use by the authorities and stakeholders in dealing with air quality management.
 - **City Air Action Plans:** We support the review of the City Air Action Plans of the three selected cities (Surat, Nagpur, Pune) and suggest measures for improving the Action Plans to achieve the targeted air pollution reductions.
 - We develop a reference document on technologies and case examples for vehicle fitness certification.

² <https://prana.cpcb.gov.in/>

- We develop reference documents on technologies and case examples for brick kilns and for vehicle fitness certification
- **Environmental technologies for air pollution reduction:** We provide technically sound and financially viable solutions for:
 - Suitable sensors for air quality monitoring in cities and decision-support systems.
 - Urban traffic and transportation infrastructure, i.e., parking management, low emission zones etc.
 - Decentralised waste management solutions and implementation of pilot projects.
- **Awareness Raising and Capacity Development:** We undertake awareness programmes and promote the exchange of experiences among the three selected cities and replication of activities in other cities. We conduct training programmes to strengthen the capacity of government officials and other stakeholders. We document the lessons learned and identify potential for replication.
- **Foster International Cooperation:** We launch webinars to foster an exchange of experiences between India, Germany, and other GIZ-projects in Mexico and Vietnam around lessons learned in air quality management.

Key results

- Environmental technologies for selected sectors (waste, traffic and transportation, sensors for air quality measurements) and reference documents for planning air pollution control measures will be available for reduction of air pollution in the three selected Indian cities in support of the implementation of India's National Clean Air Programme.
- The Portal for Regulation of Air pollution in Non-Attainment cities (PRANA) has been developed to support tracking of physical as well as financial status of city air action plan implementation, and disseminate information on air quality management efforts under Government of India's National Clean Air Programme (NCAP).

Project partners

- Indian Ministry of Environment, Forest and Climate Change



Imprint

Published by
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Global Project
"Support of the Export Initiative Environmental Protection" (BMUV)
project duration 2019 to 2023

Köthener Str. 2
10963 Berlin / Germany
T +49 (0) 30 338 424 646
E markus.luecke@giz.de
I www.giz.de

More information
<https://www.giz.de/en/worldwide/78869.html>

Edited by
Markus Lücke
Dr. Vanesa Rodriguez Osuna
Thilanka Seneviratne

Design
Crolla Lowis GmbH, Aachen / Germany

Printed by
Braun & Sohn, Maintal, Germany
Printed on FSC-certified paper

Photo credits
© GIZ & Unsplash

As at
June 2022

GIZ is responsible for the content of this publication.

On behalf of
Federal Ministry for the Environment,
Nature Conservation, Nuclear Safety and Consumer Protection (BMUV)

Stresemannstraße 128 - 130,
10117 Berlin / Germany
I www.exportinitiative-umweltschutz.de

On behalf of:



Federal Ministry
for the Environment, Nature Conservation,
Nuclear Safety and Consumer Protection

of the Federal Republic of Germany



Management of Organic Waste in India



Background

India generates 62 million tonnes of municipal solid waste per year, of which 75% is collected. Only 20% of collected waste is treated (CPCB, 2017-2018)¹. About 80% of this waste lands up in landfills, thus contributing significantly to environmental degradation and posing risks for human health (MoUD, 2016)². Waste generation in the country is likely to more than double by 2030, increasing up to 165 metric tonnes (MT) per year (World Bank, 2018)³.

Of the municipal solid waste generated, 50% is composed of organic waste. India has the potential to reuse this share in order to produce 5.4 MT of city compost annually. According to the Ministry of Housing and Urban Affairs (MoHUA, 2018-2019)⁴, there are almost 700 functional compost plants in the country with an annual production capacity of 18.9 million MT. However, given that most plants are under-utilized, currently only 0.2 million MT are produced from city compost.

The “Swachh Bharat Mission Urban” launched in 2014 by the MoHUA, provided a framework to tackle two of the country’s key urban challenges: the management of municipal solid waste, and sewage. The Ministry of Environment, Forest and Climate Change (MoEFCC)

published a revised version of the Solid Waste Management Rules in 2016, strengthening integrated solid waste management following the international waste management hierarchy. Despite several initiatives taken up by the government to foster the production and (re)utilization of city compost as a business model, as well as to encourage its subsequent use by farmers, organic waste management still faces various challenges. These include poor or no segregation at source, contamination with extraneous material, unsafe application, higher costs compared to other products leading to a mistrust associated with city compost and organic fertilizer.

Aim of the cooperation



With a focus on integrated waste management, the project improves sustainable organic waste management practices in the three cities of Kanpur, Kochi and Port Blair, in states, and at the national level. This includes centralised and decentralised systems of organic waste management like aerobic composting and biological methanation.

The measures implemented in this module are envisaged as an accompanying measure to the project “Cities Combating Plastic Entering the Marine Environment”. These measures contribute directly to the UN Sustainable Development Goals of making cities and human settlements inclusive, safe, resilient, and sustainable (SDG 11, target 11.6).

- 1 Central Pollution Control Board (CPCB) (2017-18). Annual report. Ministry of Environment, Forest, and Climate Change. Government of India
- 2 Ministry of Urban Development (2016). Municipal Solid Waste Management Manual. Government of India
- 3 World Bank (2018). What a Waste 2.0. A Global Snapshot of Solid Waste Management to 2050. Urban Development Series. World Bank Group.
- 4 Ministry of Housing and Urban Affairs (2019). Annual Report 2018-19. Government of India

What we do

The project activities include issues of segregation at source, quality control of compost, testing, and linking with markets in urban and peri-urban areas, implemented at the city, state, and national level:

- **City level (Kochi, Kanpur, and Port Blair):** We review ongoing organic waste management and support the development of a city strategy for organic waste management, including recommendations and a roadmap for implementation. We support the implementation of technical measures for improved organic waste management in each city.
- **State level (Kerala, Uttar Pradesh, and Andaman & Nicobar Islands):** We develop and review existing state strategies, identify gaps, provide recommendations and develop a roadmap in three states for the rollout of sustainable organic waste management. We develop training modules for organic waste management and capacity development measures for officials (based on the state strategy).
- **National Level (MoHUA):** We provide advice on sustainable organic waste management at the national level for implementation in states and cities. We conduct training and capacity-building measures.

In addition, awareness raising activities for organic waste management and standard operating procedures are developed at city and state levels. Furthermore, delegation visits to Germany are planned for the municipal, state and national officials accompanying the implementation measures.

Key results

- Guidelines, digital tools, standard operating procedures and a roadmap for upscaling have been developed under the umbrella of the MoHUA and the state urban development departments of Kerala, Uttar Pradesh, and the Union Territory of Andaman & Nicobar Islands. These have been accompanied by capacity building and awareness campaigns.

Imprint

Published by
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Global Project
“Support of the Export Initiative Environmental Protection” (BMUV)
project duration 2019 to 2023

Köthener Str. 2
10963 Berlin / Germany
T +49 (0) 30 338 424 646
E markus.luecke@giz.de
I www.giz.de

More information
<https://www.giz.de/en/worldwide/78869.html>

Edited by
Markus Lücke
Dr. Vanesa Rodriguez Osuna
Thilanka Seneviratne

Design
Crolla Lowis GmbH, Aachen / Germany

Printed by
Braun & Sohn, Maintal, Germany
Printed on FSC-certified paper

- One technical measure for sustainable organic waste management has been implemented in three cities and at state level.
- The capacities of partners in the areas of organic waste management have been strengthened with tailored training and capacity building measures.
- The national consulting partner Saahas has completed three city action plans for Kochi, Kanpur and Port Blair
- The University of Rostock has completed field visits to the partner states of Kerala and Uttar Pradesh and the partner city Port Blair. State strategies have been developed and are under review.

Project partners

- Indian Ministry of Housing and Urban Affairs
- Non-profit organization Saahas
- University of Rostock
- Partner cities: Kochi, Kanpur & Port Blair
- Partner states: Kerala, Uttar Pradesh and Nicobar and Andaman Islands



Photo credits
© GIZ & Unsplash

As at
June 2022

GIZ is responsible for the content of this publication.

On behalf of
Federal Ministry for the Environment,
Nature Conservation, Nuclear Safety and Consumer Protection (BMUV)

Stresemannstraße 128 - 130,
10117 Berlin / Germany
I www.exportinitiative-umweltschutz.de

On behalf of:



Federal Ministry
for the Environment, Nature Conservation,
Nuclear Safety and Consumer Protection

of the Federal Republic of Germany



Introduction of an Extended Producer Responsibility system for packaging



Background

Jordan has undergone intensive economic development and constant population growth in recent decades. This has resulted, among other things, in increasing packaging waste and associated environmental issues. With the technical support of the German consultancy cyclos GmbH, the Jordanian government has prepared a legal framework including instructions on packaging materials, which will serve as the foundation for introducing an extended producer responsibility (EPR) system for packaging waste.

The application of the instructions ensures the long-term financing of a recycling collection and recovery system for packaging. The system shall be organised by the private sector and financed by industry, for this reason the Producer Responsibility Organization (PRO) will be hosted by the Jordan Chamber of Industry (JCI) in which a specialized unit within the JCI will be established for registering private companies into the EPR system, collecting fees from industries producing packaging materials and financing the recycling industries in Jordan. The Ministry of Environment is committed to working in close cooperation with the Jordan Chamber of Industry to ensure that the PRO operates successfully and spends the fees collected on improving the recycling environment of packaging materials in Jordan.

Aim of the cooperation



The objective is to support the development of an EPR system by adapting and creating institutional and operational frameworks. The module makes a direct contribution to the Sustainable Development Goal on the development of sustainable cities and settlements (SDG 11), in particular target 11.6: “By 2030, reduce the adverse per capita environmental impact of cities, including by paying attention to air quality and municipal and other waste management”.

What we do

- **Legal framework:** In cooperation with international experts from the cyclos GmbH, a legal framework including instructions of packaging materials was introduced to the Ministry of Environment, the Jordan Chamber of Industry, and the Jordan Chamber of Commerce. The final version of the instructions was agreed upon between the three key stakeholders and is approved by the Higher Steering Committee for Waste Management. The approved instructions are currently with the Prime Ministry pending endorsement.
- **Administrative framework:** We support the Jordan Chamber of Industry in developing a Producer Responsibility Organization that will implement the EPR system, taking into account the defi-

dition of responsibilities to take over its statutory tasks by building up the necessary operational and administrative capacities.

- **Policy advice:** We support the Jordanian Ministry of Environment in building the necessary institutional and human resource capacities to implement its tasks as the central supervisory authority for the registration and oversight of the EPR system.
- **Pilot projects:** Together with our partners, we are developing pilot projects for separate collection systems for packaging materials in Jordan. One pilot project will be implemented in Petra in cooperation with Petra Development and Tourism Region Authority (PDTRA). Another pilot project will be implemented in the capital city Amman.
- **Knowledge management:** We process the results and experiences of the pilot project and actively introduce them to relevant stakeholders in our partner countries.

Key results

- In August 2020, under Article (7), paragraph (c) of the Framework Law on Waste Management No. 16 of 2020, the Jordanian Ministry of Environment introduced the notion of the EPR system in this general waste regulation. Specific EPR legislation is being developed by the Ministry of Environment including EPR Instructions for Packaging Waste.
- The detailed EPR regulations developed in cooperation with cyclos GmbH were approved by the ministerial Higher Steering Committee for Waste Management. Waiting for Cabinet approval.
- The development of a registration system for producers and importers of packaging material has been contracted and will be developed in cooperation with the Ministry of Environment and the Chamber of Industry.
- The company that will introduce The Fortunate Planet App for the collecting and managing of packaging waste has been contracted.

Imprint

Published by
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Global Project
“Support of the Export Initiative Environmental Protection” (BMUV)
project duration 2019 to 2023

Köthener Str. 2
10963 Berlin / Germany
T +49 (0) 30 338 424 646
E markus.luecke@giz.de
I www.giz.de

More information
<https://www.giz.de/en/worldwide/78869.html>

Edited by
Markus Lücke
Dr. Vanesa Rodriguez Osuna
Thilanka Seneviratne

Design
Crolla Lowis GmbH, Aachen / Germany

Printed by
Braun & Sohn, Maintal, Germany
Printed on FSC-certified paper

- Four electric collection vehicles and trolleys have been purchased and handed over to the Great Amman Municipality (GAM).
- A grant agreement for separate collection has been prepared with Petra Development and Tourism Region Authority (PDTRA) for introducing separate collection for PET bottles.
- A packaging market analysis has been carried out by Gesellschaft für Verpackungsmarktforschung (GVM) which serves as a baseline for the implementation of the EPR System.

Project partners

- Jordanian Ministry of Environment
- Jordan Chamber of Industry
- Jordan Chamber of Commerce
- Petra Development and Tourism Region Authority
- Jordanian Association for Recycling the Consumer Packaging Materials
- Greater Amman Municipality
- cyclos GmbH



Photo credits
© GIZ & Unsplash

As at
June 2022

GIZ is responsible for the content of this publication.

On behalf of
Federal Ministry for the Environment,
Nature Conservation, Nuclear Safety and Consumer Protection (BMUV)

Stresemannstraße 128 - 130,
10117 Berlin / Germany
I www.exportinitiative-umweltschutz.de

On behalf of:



Federal Ministry
for the Environment, Nature Conservation,
Nuclear Safety and Consumer Protection

of the Federal Republic of Germany



Collaborative Action for Single-Use Plastic Prevention in Southeast Asia



Background

Existing production and consumption patterns in Southeast Asian countries are mostly based on a linear raw materials economy in which plastic materials are poorly managed and disposed of as waste after a short period of use. The widespread use of single-use plastic (SUP) contributes significantly to the pollution of water and seas. Low raw material prices, counterproductive incentive systems, a lack of awareness and viable alternatives are the main reasons for the rapidly growing amount of disposable plastic. Thai and Malaysian policy makers have recognised that the introduction of circular economy principles in production and trade along the waste hierarchy (i.e. reduce, reuse, recycle) can be an essential solution, although the focus on prevention strategies has only recently become a political focus.

The project responds to Malaysia's Plastics Sustainability Roadmap (2021-2030), Thailand's Plastic Roadmap (2018-2030), which aims at reducing or banning SUP products by replacing these with durable, repairable, and more environmentally friendly alternatives, and Indonesia's National Action Plan on Marine Plastic Debris (2017 – 2025).

Our Goal

The aim of the project is to reduce single-use plastic waste with a clear focus on upstream strategies of prevention and promotion of re-use approaches. To this end, the project employs a blended approach, consisting of policy advice on circular economy and



extended producer responsibility (EPR) approaches (Malaysia only), capacity development for key stakeholders, local government pilot activities and support for innovative re-use business models. The project contributes directly to the Sustainable Development Goal to ensure sustainable production and consumption patterns (SDG 12), especially Target 12.5

“By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse”.

What we do

- **Institutional Framework:** We advise and support our local partners and other key players in the development of recycling markets and implementation of systems for EPR (in Malaysia). Furthermore, we provide advice on product related environmental protection such as the development of eco-designs, recycled content targets, recyclability guidelines and material efficiency criteria. These can then be certified with eco-labels and supported through sustainable public procurement.
- **New Business Solutions:** We support Thai, Malaysian, Indonesian and other international partners in the development of innovative and sustainable reuse business models such as reusable food container systems for food delivery and refill applications for (household) cleaning products.

- **Pilot Projects:** We design and implement pilot projects aiming at SUP reduction with local municipalities and businesses.
- **Knowledge Management:** We analyse and collect lessons learnt and disseminate best practices to relevant institutions.

Key results

- Enabling knowledge transfer and exchange through Institutionalization of multi-stakeholder working groups on EPR (Malaysia only), Eco Design for Recycling and local pilot projects in Thailand and Malaysia
- Development of a comprehensive policy recommendation paper on upstream measures for single-use plastic and packaging reduction in Thailand which is undergoing stakeholder consultation
- Publication of background studies with Öko Institut e.V. on upstream SUP policy options which aims to disseminate knowledge and good practices (Design for Recycling, Biobased and Biodegradable Plastics, Material Choices for environment-friendly packaging design, Recycled Content in Packaging Applications, Considerations for Packaging Classification)
- Transfer and exchange of knowledge on all topics covered in the project during 7 dialogue exchange events with international experts and stakeholders from South-East Asia.
- Capacity building through 6 in-depth training programmes on key policy instruments and tools for upstream SUP prevention.
- Dissemination of reuse solutions by setting up 2 reuse start-ups with our partner ENVIU, which were launched in the Malaysian market (Tapauware: a reusable food container for food delivery, FlexiFill: a refill solution for household cleaning products).
- Designing and implementing pilot projects aimed at SUP reduction together with local municipalities in Thailand (Phuket), Malaysia (Shah Alam) and Indonesia (Jakarta). Based on baseline assessments and stakeholder engagements with restaurants and hotels, an MoU was signed with partners.

Imprint

Published by
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Global Project
“Support of the Export Initiative Environmental Protection” (BMUV)
project duration 2019 to 2023

Köthener Str. 2
10963 Berlin / Germany
T +49 (0) 30 338 424 646
E markus.luecke@giz.de
I www.giz.de

More information
<https://www.giz.de/en/worldwide/78869.html>

Edited by
Markus Lücke
Dr. Vanesa Rodriguez Osuna
Thilanka Seneviratne

Design
Crolla Lowis GmbH, Aachen / Germany

Printed by
Braun & Sohn, Maintal, Germany
Printed on FSC-certified paper

Project partners

Thailand:

National Metal and Material Technology Center/ National Science and Technology Agency • The Office of National Higher Education Science Research and Innovation Policy Council • Thai Environmental Institute • Pollution Control Department • Thai Business Council on Sustainable Development • Thai Industrial Standards Institute • Plastic Industry Club/ Federation of Thai Industries • Plastic Institute of Thailand • Department of Environmental Promotion • Food and Drug Administration • ÖKO Institut e.V.

Malaysia:

Economic Planning Unit, Prime Minister Department • Ministry of Environment and Water • Ministry of Housing and Local Government • Malaysian Green Technology and Climate Change Centre • Standard and Industrial Research Institute of Malaysia • ÖKO Institut e.V. • ENVIU • cyclos GmbH

Indonesia:

Coordinating Ministry of Maritime Affairs and Investment • Provincial Government of DKI Jakarta • National Plastic Action Partnership • ÖKO Institut e.V. • ALAS by ENVIU • Indonesia Plastic Diet Movement (Gerakan Indonesia Diet Kantong Plastik)



Photo credits
© GIZ, Napat Wesshasartar & Unsplash

As at
June 2022

GIZ is responsible for the content of this publication.

On behalf of
Federal Ministry for the Environment,
Nature Conservation, Nuclear Safety and Consumer Protection (BMUV)

Stresemannstraße 128 - 130,
10117 Berlin / Germany
I www.exportinitiative-umweltschutz.de

On behalf of:



Federal Ministry
for the Environment, Nature Conservation,
Nuclear Safety and Consumer Protection

of the Federal Republic of Germany



Improving regional cooperation on waste and resource management in the Poltava region



Background

Despite the Russian war of aggression against Ukraine, the project activities continue as far as possible and in close coordination with the partners. The facts and figures given here refer to the period before the war.

In Ukraine, almost 98% of all municipal waste is dumped in landfills. Only few cities have differentiated collection for recyclables, which often do not function properly. Only 70% of the population is even connected to a public waste disposal network. Unofficial landfills are common in many areas. Landfills, in most cases, lack adequate sealing, gas recovery systems and leakage infrastructure.

Municipal waste management is usually carried out by public-private partnerships or private waste management companies. However, there is a lack of adequate recycling tariffs that allow waste disposers to collect and recycle waste separately. As part of the decentralisation process in the country, some power has been transferred to the regions and municipalities, but they do not yet have the necessary capacity to cope with their new responsibilities. With support of the German Development Cooperation, a national waste strategy was developed for Ukraine. It was put into force by the Ukrainian government in November 2017. The strategy provides for the reform of municipal waste management and the introduction of regional waste management plans. A regional waste strategy was adopted by the Poltava Oblast State Administration at the end of 2017.

Aim of the cooperation



The objective is to develop and implement a regional waste strategy for Poltava with a focus on sub-regional forms of cooperation in the region. The module makes a direct contribution to the development of sustainable cities and settlements (SDG 11), in particular to target 11.6: “By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management”.

What we do

- **Policy advice:** We support our local partners in conducting baseline studies, analysing the role of subregions in waste management planning, identifying best instruments of inter-communal cooperation and drafting solid-waste management plans.
- **Capacity building:** Together with German and Ukrainian partners, we support the development of capacities at various administrative levels.
- **Pilot projects:** We prepare a report on the results and experiences of the pilot project and actively introduce them to relevant stakeholders in our partner countries.

- **Strategy development:** Together with our partners, we develop a strategy for sub regional cooperation.
- **Reference documents:** We prepare reference documents for the waste management operation and maintenance of technical equipment.
- **Knowledge management:** In the long term, we promote professional exchange with German waste management companies.

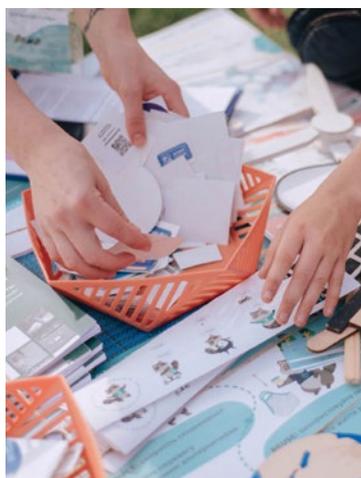
Key results

- An analysis of the current implementation of local waste management plans in the western sub- region of Poltava Oblast was conducted and recommendations for further implementation have been made available. Subsequently, a strategy for subregional cooperation has been developed.
- Working meetings and exchange visits were held for professional exchange with German waste management companies for knowledge transfer on waste management

- Information campaigns on public awareness in the field of waste management were conducted for the Poltava region
- A virtual 3D tour of the Poltava City Landfill was created as part of the educational work and awareness raising.
- An e-learning module (Zero Waste Academy) with online lectures about how to avoid, recycle and manage waste has been launched.

Project partners

- Ukrainian Ministry of Communities and Territories Development
- Poltava Oblast State Administration
- Local self-governing authorities (towns and municipalities) of the Poltava region



Imprint

Published by
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Global Project
“Support of the Export Initiative Environmental Protection” (BMUV)
project duration 2019 to 2023

Köthener Str. 2
10963 Berlin / Germany
T +49 (0) 30 338 424 646
E markus.luecke@giz.de
I www.giz.de

More information
<https://www.giz.de/en/worldwide/78869.html>

Edited by
Markus Lücke
Dr. Vanesa Rodriguez Osuna
Thilanka Seneviratne

Design
Crolla Lowis GmbH, Aachen / Germany

Printed by
Braun & Sohn, Maintal, Germany
Printed on FSC-certified paper

Photo credits

© NGO „Social project Ekoltava“, Diana Rodnaia, Anna Vasetska & Unsplash

As at
June 2022

GIZ is responsible for the content of this publication.

On behalf of
Federal Ministry for the Environment,
Nature Conservation, Nuclear Safety and Consumer Protection (BMUV)

Stresemannstraße 128 - 130,
10117 Berlin / Germany
I www.exportinitiative-umweltschutz.de

On behalf of:



Federal Ministry
for the Environment, Nature Conservation,
Nuclear Safety and Consumer Protection

of the Federal Republic of Germany

Imprint

Published by
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Global Project
“Support of the Export Initiative Environmental Protection” (BMUV)
Project duration 2019 to 2023

Köthener Str. 2
10963 Berlin / Germany
T +49 (0) 30 338 424 646
E markus.luecke@giz.de
I www.giz.de

More information
<https://www.giz.de/en/worldwide/78869.html>

Edited by
Markus Lücke
Dr. Vanesa Rodriguez Osuna
Thilanka Seneviratne

Design
Crolla Lowis GmbH, Aachen / Germany

Printed by
Braun & Sohn, Maintal, Germany
Printed on FSC-certified paper

Photo credits
© GIZ, BEE Media Productions, Global Solutions Initiative/
Tobias Koch, Global Solutions Initiative/Rolf Schulden, Napat
Wesshasartar, NGO „Social project Ekoltava“, Diana Rodnaia,
Anna Vasetska & Unsplash

As at
June 2022

GIZ is responsible for the content of this publication.

On behalf of
Federal Ministry for the Environment,
Nature Conservation, Nuclear Safety and
Consumer Protection (BMUV)

Stresemannstraße 128 - 130,
10117 Berlin / Germany
I www.exportinitiative-umweltschutz.de

On behalf of:



Federal Ministry
for the Environment, Nature Conservation
Nuclear Safety and Consumer Protection

of the Federal Republic of Germany

