

# POLY PROBLEM

R E P O R T

# THE WASTE OF OTHERS

About the responsibility for the flood of plastic  
in Asia | **CONCEPTS, INITIATIVES, PLAYERS**

WIDER  
SENSE



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# THE WASTE OF OTHERS

“Don’t point the finger at emerging and developing countries. Take action in your own area of influence. Clean up your own backyard first.” This is what Delphine Lévi Alvarès, the European Coordinator of the global movement “Break Free From Plastic”, called for at the POLYPROBLEM Stakeholder Dialog 2019 in Berlin. There is good reason for this. Commitment to well-regulated waste management is widespread. But does this make sense, and is it effective?

Over half of the plastic waste found in our oceans comes from just five countries: China, Indonesia, Thailand, the Philippines and Vietnam. There is hardly any other fact that is cited as often as this finding from the US research team led by Jenna R. Jambeck from 2015.<sup>1</sup> Since then, the reduction of emission sources in the Asian hot spots has been a priority objective in the fight against the flood of plastic.

It is therefore not surprising that countless civil society projects, NGOs, companies and government institutions in developed industrial countries are trying to set up a functioning waste management system, particularly in Asia and Africa.

So many social enterprises and projects have been formed in the meantime with this mission that it is almost impossible to know which is doing what – let alone ensure a systematic exchange of experiences. Some of them are developing collecting boxes for plastic waste, while others are devising new business models for the waste pickers living in precarious conditions on riverbanks and seashores.

Major aid organizations have also zeroed in on the topic. The topic of plastic waste is now part of the development policy of the German government.<sup>2</sup> Meanwhile, the industry is forming large networks to finance solutions collectively. These alliances are usually led by those companies that produce and place huge quantities of plastic packaging on the market: Manufacturers, major brands, discounters.

Does this mean that the people now riding to the rescue are those that are most responsible for this pollution, as nature conservation organizations critically observed? The question does not solve the problem. But it can still be asked. Especially since the industrial nations have in recent decades exported their carefully collected domestic plastic waste on a massive scale to precisely those countries in which they now want to contribute to regulated waste management. In the meantime, China has stopped the import of such waste,<sup>3,4</sup> while other Asian countries have already sent back whole cargo ships full of plastic to their countries of origin. Gerd Müller, the German Federal Minister for Economic Cooperation and Development, would ideally like to ban the export of waste completely.<sup>5</sup>

Despite the many voices in the Global North denouncing the flows of plastic to the Global South, the successes to date are fairly negligible.

The POLYPROBLEM report “The Waste of Others” is a discussion paper. It scrutinizes the efforts to better manage plastic waste at the hot spots in the emerging and developing regions. It compares the various different concepts and provides an overview of the key players and their initiatives. It ranks the opportunities, risks and responsibilities from the perspective of experts and protagonists. The fight against complex, global problems requires a clear orientation and open discussions. To ensure that “well-intentioned” can become a job “well done”.

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1 Jambeck et al. (2015)

2 GIZ <https://www.giz.de/de/weltweit/15109.html>

3 NABU (2019)

4 Bauchmüller, Giesen (2018)

5 epo (2019)

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# THE CURRENT SITUATION

Facts and developments

# (NOT) A QUESTION OF BLAME

## Why the problem cannot be solved in Asia alone

The Global South, and Southeast Asia in particular, is often referred to in public debate as being the main region responsible for the huge influx of plastic waste into the environment. It has been proved beyond doubt that the biggest quantity of plastic waste enters the waters in this region of the world. Equally important, however, is the finding that people in emerging and developing countries consume significantly less plastic per capita than the population in the rich industrial countries.

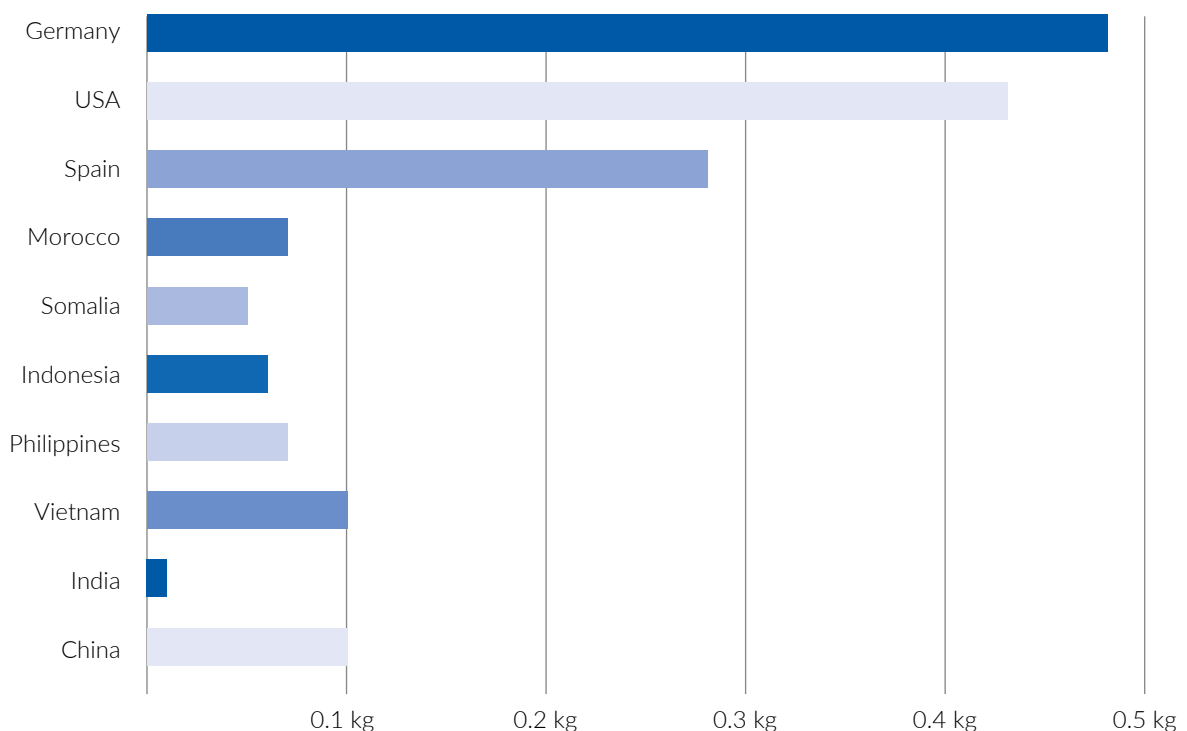
This means that the biggest sources of plastic pollution are **not** the biggest consumers of plastic. On the contrary: The more prosperous a region is, the greater its consumption of plastic.

In connection with the ecological consequences, this finding appears significant when it comes to the concept of who is responsible for the overall problem and its solution. And this is not just meant as a figure of speech. The careful distinction between consumption

and emissions is also essential for guiding the global efforts to find solutions.

To put it simply: While the focus in emerging and developing countries must be on improving waste management, industrial countries face a challenge of equivalent magnitude – namely to reduce the consumption of disposable packaging, i.e. at the consumer level, more systematically.

### Average plastic waste volume per person/day (2010)



Source: Jambeck et al. (2015) Plastic waste inputs from land into the ocean, Science, 347 (223), 768-771

## THE FOLLOWING<sup>6</sup> DATA BACKS THIS ASSERTION UP:

- Compared with other countries, Germany is the clear number one when it comes to plastic consumption. Germans consume 0.48 kilograms of plastic per capita per day, followed by Ireland with 0.43 kilograms. In the USA, the daily consumption per capita is 0.34 kilograms. There is no African country that comes even close to such consumption values.
- In India, the average plastic consumption per capita per day is 0.01 kilograms. The per capita consumption in Germany is thus almost fifty times higher than that in India.
- When we look at just the absolute figures, China produces the greatest amount of plastic. However, this is put into perspective when considered in relation to the overall population. The per capita consumption of the Chinese is 0.12 kilograms and thus four times lower than in Germany.

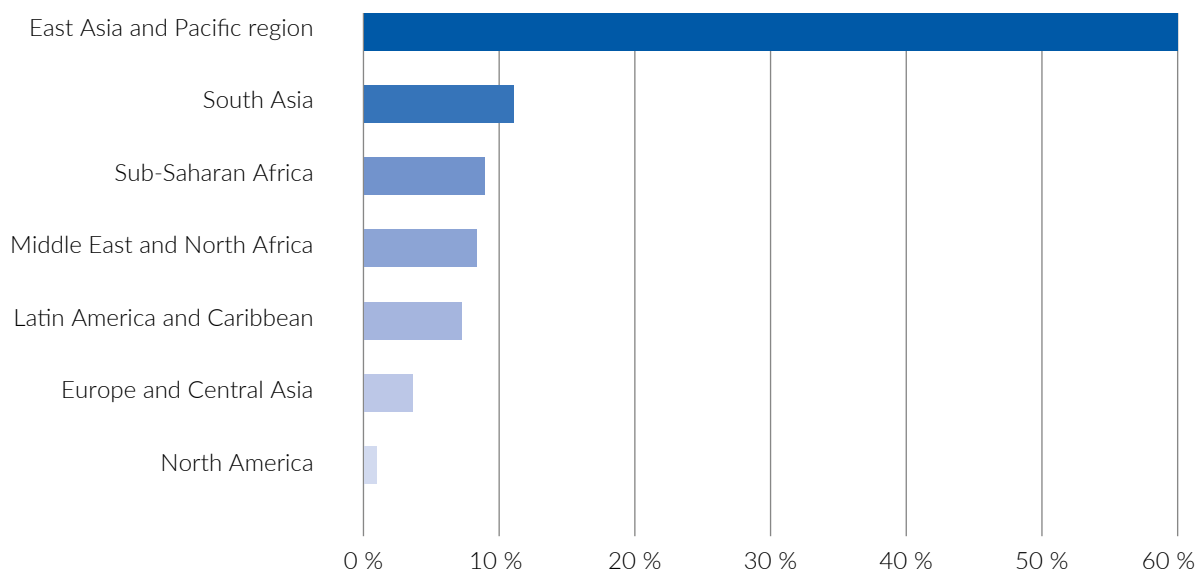
A completely different picture emerges when we look at how plastic waste is collected, disposed of and recycled:

In countries with a low average level of wealth, the figures for the mismanagement of plastic waste range between a massive 80% and 90%. Despite the comparatively low per capita consumption, this situation leads to the familiar figures: Approximately 60% of all the plastic waste in water systems that enters the environment comes from East Asia and the South Pacific region.

What is important in the study entitled “Plastic waste inputs from land into the ocean” (J. Jambeck et al.) is the definition of the term “mismanaged”, i.e. waste that is poorly or incorrectly managed. For the authors, this refers not just to plastic waste that is carelessly discarded in the environment. Rather, the term also includes the waste that is picked up – for example, by waste pickers – but not properly disposed of or recycled and that therefore still remains an emission risk. This definition is relevant when evaluating the role of informal collections in local waste management systems (see chapter “Objects of Value”).

The unmistakable finding that plastic consumption is directly linked to the prosperity of a region leads to the core of the problem behind the huge plastic waste emissions in the Global South: Prosperity in the emerg-

## Global environmental pollution caused by plastic by regions (2010)



Quelle: OurWorldinData basierend auf Jambeck et al. (2015)



ing countries of South Asia is increasing.

Consumption is increasing rapidly. The infrastructure required to collect and recycle waste is, however, increasing at nowhere near the same rate.

It is difficult to imagine what it would mean for the environment if, for example, India, Vietnam or Indonesia came anywhere near the German per capita consumption of plastic without developing an appropriate infrastructure at the same time.

However, this impending scenario should not tempt the

Western industrial societies to call for the emerging and developing countries to reduce their growth and consumption, particularly when this is something the Western countries do not do themselves.

The data analysis speaks for itself: The widespread introduction of reliable and economically viable waste management systems in the Global South and in South-east Asia in particular must be given high priority. In this connection, both the producer responsibility of business and the development policy commitment of the industrial countries will be required to a greater extent than previously.

## WITH A VENGEANCE

### Politicians are reacting to the flood of plastic in the Global South as well

More and more countries worldwide are deciding on politically driven measures to cope with the flood of plastic (packaging) waste. While the EU and Japan have played a leading role in this field for decades, the countries from the Global South in particular are faced with a two-fold challenge: They are confronted with a drastic increase in plastic packaging waste associated with increasing prosperity and the corresponding increasing consumption. However, the development of municipal waste management systems<sup>7</sup> is not keeping pace with the rising consumption.

#### REASON FOR HOPE

Countries from the Global South have in recent years been intensifying their efforts to introduce laws intended to pave the way for a circular economy.<sup>8</sup> The efforts to develop joint measures for setting up waste management systems are also increasing transnationally. In 2019, the countries from the Association of

Southeast Asian Nations (ASEAN)<sup>9</sup> agreed on a “Framework of Action on Marine Debris”. Critics note that this is what transregional efforts can look like in the fight against plastic waste. However, they say that the focus on waste management and thus on end-of-pipe measures ignores the fact that plastic waste pollution starts with the production of the plastic itself. They conclude that the only way to develop a circular economy in Southeast Asia in the medium to long term is by taking the entire lifecycle of plastic into account.<sup>10</sup>

#### POLICY MEASURES FOR SETTING UP A CIRCULAR ECONOMY

Governments currently draw on various tools to implement a circular economy in the field of plastic packaging. Based on an analysis of these tools, the United Nations Environment Programme (UNEP) has developed a three-stage model that also takes the potential effectiveness of the individual tools into account:

7 GA Circular (2019)

8 UNEP (2019)

9 The Association of Southeast Asian Nations consists of 10 members: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam.

Over 600 million people live in the ASEAN region, almost 100 million more than in the European Union.

10 Greenpeace Southeast Asia (2019)

#### — Core Policies

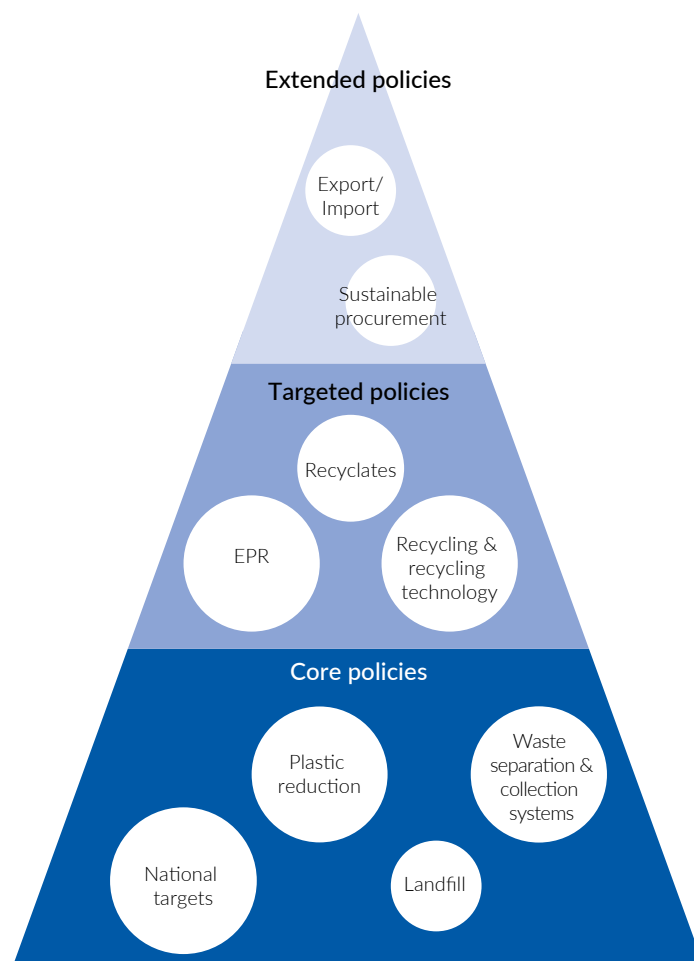
These include approaches that are vital for the introduction of a circular economy, such as a reduction in plastic production, source separation and separate collection, the setting of national targets for waste reduction, reuse and strict regulation or banning of landfill sites.<sup>11</sup>

#### — Targeted Policies

Targeted policies address specific players in the market. These measures include, for example, the statutory introduction of an extended producer responsibility (EPR) or binding targets regarding the use of recyclates in the production of new plastic products.<sup>12</sup>

#### — Extended Policies

These involve measures that deal, for example, with the export and import of packaging waste or green procurement. These political tools often overlap with other political objectives that go beyond better management of packaging waste.<sup>13</sup>



## EXAMPLES OF COUNTRIES THAT HAVE TAKEN REGULATORY ACTION

### INDONESIA

After China, Indonesia is the second-biggest source of plastic waste pollution. It is currently assumed that approximately 14% of the plastic waste in the oceans enters via the four largest rivers in Indonesia.<sup>14</sup>

To curb the ecological and social consequences of plastic waste pollution, Indonesia is planning to reduce the plastic waste entering the environment by 70% by 2025. The targets by 2040 are to ensure that no plastic waste whatsoever enters the environment and to have

a functioning circular economy in place. To achieve these very ambitious targets, Indonesia has come up with five important ideas designed to smooth the path to a circular economy:

1. **Reduction or substitution of disposable plastic products** to realize savings of 1.1 million tonnes per year in production in the future.
2. **Greater focus on recycling** already in the design phase of plastic products and packaging.

11 UNEP (2019)

12 Ibid.

13 Ibid.

14 World Economic Forum (2019a)

3. **Investment in the setup of a functioning and nationwide waste collection system** involving the formal and informal sectors to increase the current collection rate of 39% in cities and 16% in the countryside to a total of 80% by 2025.
4. **A doubling of the recycling capacities** to be able to recycle an additional 975,000 tonnes of plastic waste annually. In Indonesia, currently only around 10% of plastic is recycled.
5. **Expansion of official landfill sites** for the storage of non-recyclable plastic waste.

The legal framework for these targets is formed by two regulations that the Indonesian government has introduced in recent years: The “Indonesia National Waste Management Policy and Strategy” and the “Plan of Action on Marine Plastic Debris 2018-2025”. Furthermore, Indonesia was the very first country to join the Global Plastic Action Partnership (GPAP). This a public-private collaboration platform, hosted by the World Economic Forum, that has made it its business to develop solutions for Indonesia’s plastic waste problem together with important players from the public sector, science, the private sector and civil society.<sup>15</sup>

## GHANA

Ghana is the first African country and the second country overall to join the GPAP. The objective here as well is to have mechanisms in place by 2025 that will ensure that plastic waste no longer enters the ocean from Ghana. The efforts as part of the GPAP will be reinforced by two additional initiatives that Ghana has introduced on the national level: A “National Plastic Management Policy” to set up a circular economy for plastic and a “Multi-Stakeholder Waste Recovery Plat-

form” that was set up by the UN Environment Programme. This is intended to act as a central information platform and facilitate the exchange of data and technological innovations.<sup>16</sup>

The first step of the plan to introduce the first “National Plastic Management Policy” envisages extensive communication measures to change the mindset of the general population with regard to how plastic should be dealt with. In a second step, funding and innovations as well as the involvement of civil society players and companies are intended to help set up sustainable business models for dealing with plastic.<sup>17</sup>

## CHILE

Chile has made its mark as an international role model thanks to its politically driven approach to plastic waste. Its circular economy law (2016)<sup>18</sup> is regarded as one of the first attempts ever to integrate the work of waste pickers into the regulated market as a recognized, certified trade. The law regulates a certification and licensing process for waste pickers including a training program. After completing the program, the certified waste contractors can conclude waste collection contracts with municipalities directly. The law also regulates health and safety standards for waste pickers.

In 2019, Chile was also the first Latin American country to join the international network “The Plastics Pact” initiated by the Ellen MacArthur Foundation.

These examples underline the fact that the countries of the Global South are by no means waiting for intervention from the industrial countries to set up a structured waste management system and are instead embarking on a path toward a circular economy with their own political measures.

15 World Economic Forum (2020a)

16 World Economic Forum (2019b)

17 World Economic Forum (2019b)

18 Original law: La Ley de Gestión de Residuos, Responsabilidad Extendida del Productor y Fomento al Reciclaje (Ley N°20.920); English translation: <https://www.brokering.cl/law-no-20-920-extended-producer-responsibility/>

# THE END OF THE COMFORT ZONE

## More difficult conditions for plastic waste exports

The news caused quite a stir: In 2018, China abruptly stopped all imports of non-separated plastic waste. Up to then, around 56% of all plastic waste worldwide was shipped to the People’s Republic. The countries of the European Union alone shipped approximately 87% of their industrial plastic waste to China. The ban from Beijing changed many things. The export of plastic waste from industrial and emerging countries to developing countries declined overall. It has by no means ended though.

According to figures from the specialist trade publisher EUWID, Germany still exported 1.04 million tonnes of plastic waste to other countries in 2018, i.e. directly after the Chinese ban. Around 13% of this went to Malaysia, another 25% to other Asian countries. The approximately 130,000 tonnes that Germany sent to Malaysia in 2018 represented a doubling of the exports to this country within a year.

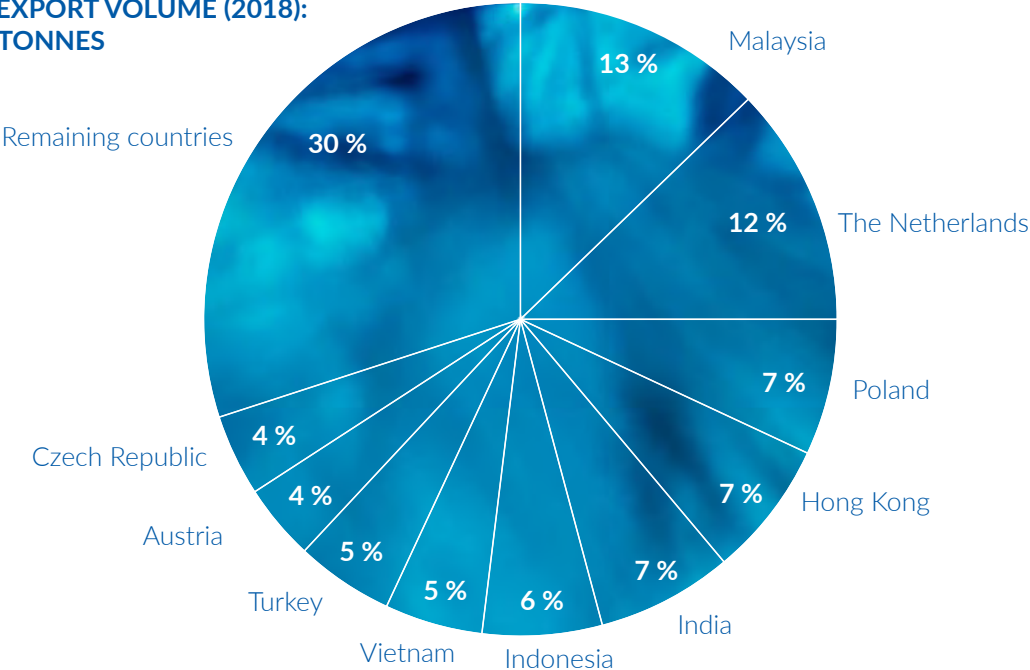
possible to fall back on other countries given the magnitude involved. In Germany alone, the exported quantity decreased from approximately 1.5 million tonnes in 2016 to a good 1 million tonnes in 2018 – i.e. by roughly a third. The discussion currently picking up speed on binding minimum quantities for recyclates in plastic products can definitely also be traced back to the fact that the export of waste is now more difficult.

The drastic measure of the Chinese resulted in a global decline in exports, but only because it was simply not

Nevertheless, the example of Malaysia shows that a paradoxical situation has not been overcome:

### Plastic waste exports from Germany in 2018 after the Chinese import ban

**TOTAL EXPORT VOLUME (2018):  
1.04 M TONNES**



Source: EUWID

The large-scale plastic consumers still export a large proportion of their waste to countries where a lack of functioning waste management systems is lamented all on sides.

Countries such as Indonesia and Vietnam have also recorded massive growth rates as recipients since China imposed its ban on plastic waste imports.

However, the awareness and wariness of the governments of these countries has also grown. Malaysia demands certificates from the importers that prove that the plastic waste has been correctly sorted and is clean. The country generated a huge international media response in 2019 when it sent back several shiploads of unsorted and soiled plastic waste to the countries of origin.

Vietnam has in the meantime announced that it will not issue any new import licenses to the companies of its domestic waste disposal and recycling industry.

The local waste disposal and recycling industry is thus facing new challenges. According to the calculations of

Brooks et al.<sup>19</sup>, the ban from China alone will lead to around 110 million tonnes of plastic waste being diverted or having to be dealt with differently by 2030.

The authors of the study see this as an opportunity for a general change on multiple levels.

Export countries could use the opportunity to improve their domestic recycling infrastructures and strengthen their home markets. There is also an increased incentive to reduce primary plastic production and use more recyclates in new plastic products. The calculation is as follows: If the export of plastic waste becomes more difficult and thus more expensive, this will make recycling comparably more cost-effective.

By contrast, countries that continue to import plastic waste could consider levying an import tax and use the additional revenue thus generated to finance the infrastructure for dealing with their own waste.



## **VIRTUALLY ONLY INDUSTRIAL PLASTIC WASTE IS EXPORTED**

In the discussion on plastic waste, the rumor persists that “It doesn’t matter if we separate our garbage here. It will all just be tipped together in any case in Asia.” This is not true. According to figures from the specialist trade publisher EUWID, only around 2% of the collected lightweight packaging (plastic, metal and composite materials) from what are known as the Dual Systems in Germany went to Asia in 2017 – i.e. even before the extensive stop on imports to China.

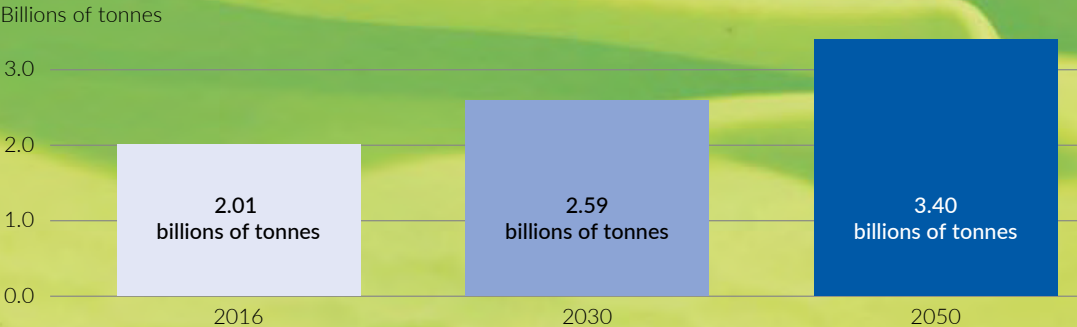
Approximately 13% of the collected packaging waste was processed in other EU countries. Roughly 85% remained in Germany.<sup>20</sup>

# THE FACTS AT A GLANCE

The urgent need to set up holistic waste management systems in the Global South becomes very apparent

when looking at the globally forecast increase in waste materials overall (not just plastic waste) by 2050:

## GLOBALLY FORECAST INCREASE IN WASTE MATERIALS

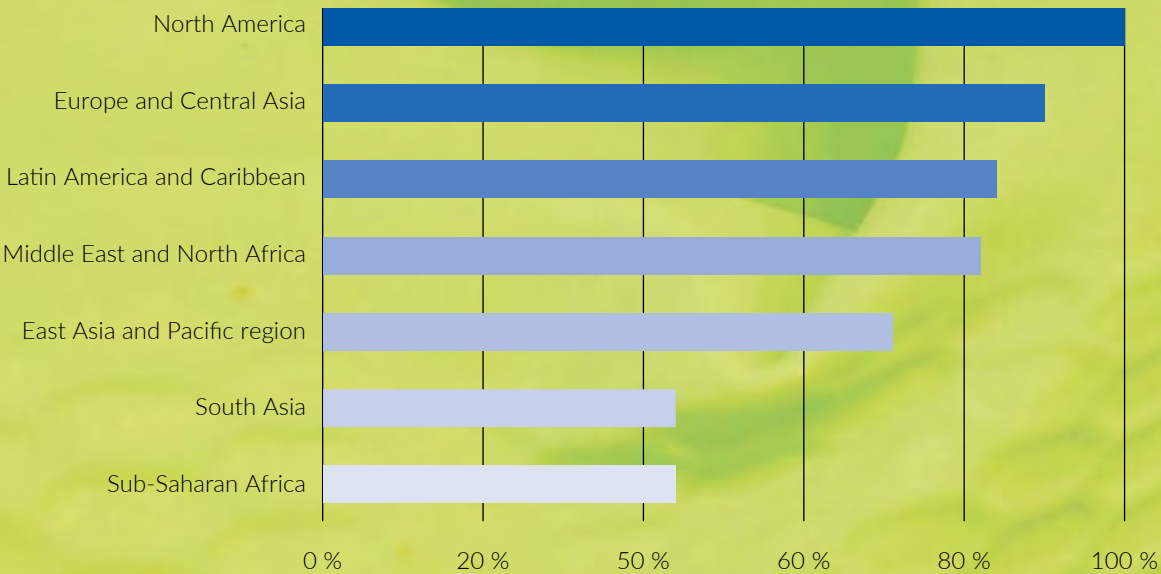


Source: Kaza et al. (2018)

This forecast contrasts sharply with the inadequate waste management systems in countries of the Global South in particular that are unable to process the quantities of waste materials. In South Asia and Sub-Saharan

Africa, roughly only 44% of the waste materials is even collected. On top of this, there is a significant difference in the collection of waste between cities (between 48% and 71%) and the countryside (between 23% and 33%).<sup>21</sup>

## COLLECTION RATE FOR WASTE MATERIALS BY REGIONS

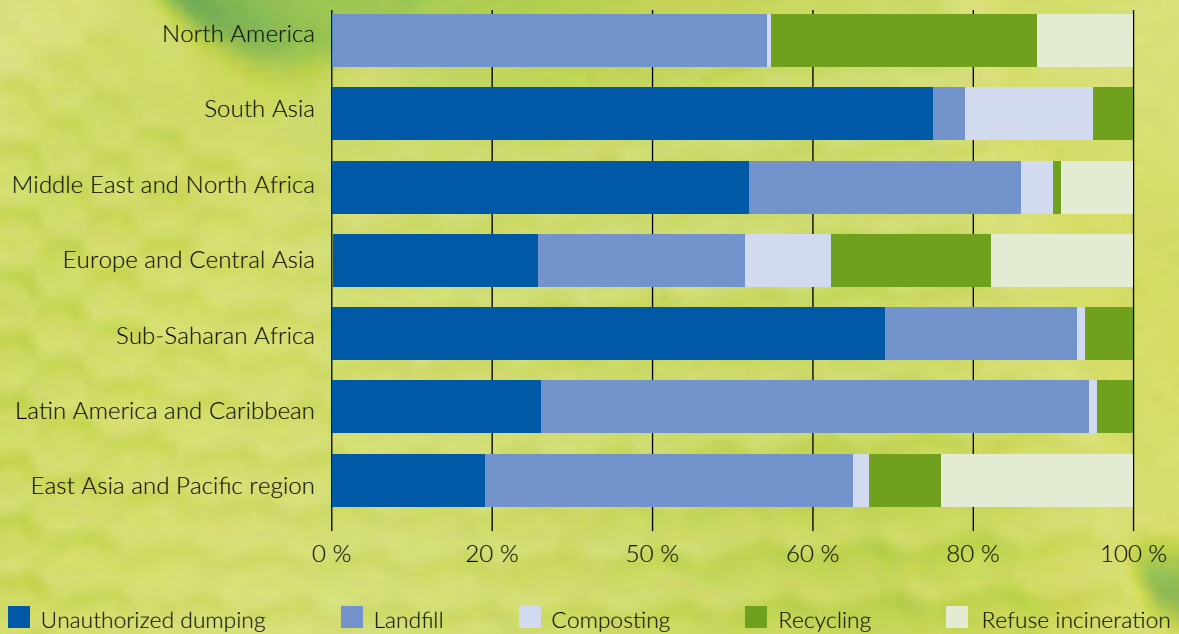


Source: Kaza et al. (2018)

The collection of waste materials on its own does not result in a circular economy. The majority of waste in South Asia and sub-Saharan Africa currently ends up in

open landfills without appropriate further processing. Other parts of the world also have a lot of catching-up to do:

## WASTE DISPOSAL BY REGIONS



Source: Kaza et al. (2018)

## DEFINITION

### What is plastic?

There is a wide range of different types of plastic. They can be divided into two main polymer groups due to their characteristics when heated: Thermoplastics and thermosetting plastics.<sup>22</sup> Furthermore, this study will also include the elastomers (rubber) among the plastics. This assignment is already well-established in scientific circles. In industry, plastic and rubber are still treated separately, and the share of rubber is not included in the statistics for the plastics industry. The same is true for synthetic fibers such as nylon. Put together, these two make up about 20% of the volume of plastics produced.<sup>23</sup>

### What is plastic waste?

This topic report defines plastic waste as emissions that enter the regulated waste management system or the environment from the actual application area and thus become a problem because they can either not be recovered from the environment or are recovered from the environment by players that did not cause the original emission.



# OBJECTS OF VALUE

Waste pickers and public services:  
How does this go together?



# THE RIGHT TO WASTE

## The role of waste pickers

Used plastic is regarded by many consumers all over the world as garbage – as worthless material. This is due to the seemingly unlimited availability and low price of new products made from plastic. Actually though, the most important prerequisite for a circular economy is to regard used plastic as a valuable resource. In the Global South, where the consumption of plastic has rapidly increased in recent years, it is not just the established recycling industry that lives on the material thrown away as waste. There, waste pickers also play a vital role when it comes to creating value from plastic.

Where a formal waste management system does not exist or only in a rudimentary fashion, it is the waste pickers who collect the plastic waste, sell it on to intermediate dealers and clean and sort it according to purity, color and type. The question as to what role this “informal sector” should play in establishing a reliable waste management system is correspondingly important and controversial.

In many countries of the Global South, the plastic waste recovered by waste pickers is several times that collected by the public waste management infrastructures. In India alone, they recycle over 4.7 million tonnes of plastic per year, whereas public waste management systems achieve just 0.2 million tonnes.<sup>24</sup>

India is not an isolated case. The existence of an informal waste sector can be traced back to environmental and economic problems in many emerging and developing countries and to increasing urbanization processes and waste management systems that work to low standards.<sup>25</sup> The informal waste sector thus fills a vacuum where municipalities are not (yet) able to set up public waste collection and recycling systems due to a lack of legislation and/or insufficient resources and capacities.

If we look at the high recycling rates of the informal sector, it could be assumed that the establishment of

sustainable waste management systems in the Global South could be significantly supported by the recognition and integration of waste pickers and that it would thus be possible to solve the social and economic problems of the informal sector as a side benefit. But is the solution really that simple?

## THE MANY FACES OF THE INFORMAL SECTOR

The informal waste sector represents an opaque mix of individual persons, groups, micro companies and in some cases local political structures<sup>26</sup> that collect and recycle waste in different ways.

Various different forms of informal waste collection can be observed: Waste pickers going from door to door and collecting reusable materials from households directly, road waste pickers and those people who search for waste in garbage containers or on landfill sites.

Access to and the privatization of waste are factors that significantly influence the livelihood of waste pickers. The concept of extended producer responsibility (EPR) states that companies that place a product on the market – i.e. the suppliers of consumer goods and retailers – are also responsible for the collection and recycling of the packaging.

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24 Ellen McArthur Foundation (2016)

25 Cf. Apacarna (2016)

26 Interview with Dr. Johannes Paul, Advisor in the Department for Climate, Environment and Infrastructure at Deutsche

Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH (German Corporation for International Cooperation) on February 25, 2020

## WASTE VALUE-ADDED CHAIN OF THE INFORMAL SECTOR



Source: World Business Council for Sustainable Development, 2016 [http://docs.wbcsd.org/2016/11/wbcsd\\_informalapproaches.pdf](http://docs.wbcsd.org/2016/11/wbcsd_informalapproaches.pdf), p. 9

What is regarded as desirable in industrial countries – for example in the form of what are known as dual systems – is perceived as existence-threatening by the waste pickers and their communities<sup>27</sup>. This thus raises the seemingly bizarre question in this part of the world as to who has the right to waste as a resource.

If waste pickers really were always at the start of the value-added chain, manufacturers would largely be freed of their responsibility for the social and environmental consequences caused by plastic waste. It is difficult to imagine such a paradigm as a central and permanent problem-solving approach.

This conflict of interest is of key importance for the commitment to stem the flood of plastic in Asia. While the blanket introduction of extended producer responsibility is viewed by many players from politics and business as the key to solving this problem, large numbers of civil society organizations and social enterprises such as the Plastic Bank<sup>28</sup> are working on strengthening the informal sector.

Despite the waste collection systems set up by some municipalities, waste pickers play a decisive role both in cities and in particular in the countryside when it comes to collecting plastic waste. However, not all types of plastic waste are profitable for them either. The prices that can be achieved for the different types of plastic differ widely.<sup>29</sup>

In Southeast Asia, waste pickers can get the best prices for PET bottles; on average, they are paid approximately 0.38 US dollars per kilogram and it takes roughly 40 minutes to collect a kilogram.<sup>30</sup>

The least money is earned with sachets (less than 0.1 US dollar/kilogram), and on average it takes 115 minutes to collect a kilogram.<sup>31</sup> The latter also involves plastic waste that is incinerated or disposed of in landfill sites or in rivers and oceans.

When collecting lightweight plastic that can be sold at a high price, waste pickers are in competition with public waste collection, where available. It is not unusual

for private households to prefer to sell their waste to the informal sector because the public sector, i.e. the formal sector, does not pay for this in contrast to the waste pickers. It is also not uncommon for waste pickers to go through the waste collected by the formal sector again looking for valuable plastic waste. To a certain degree, this thus constitutes a complementary system between the formal and informal sectors.<sup>32</sup>

The collection of waste as gainful employment is still hugely stigmatized in much of the world. The lives of those involved is characterized by illnesses due to constant contact with waste and poor access to health care, social and financial uncertainty as well as the dependency on the in some cases unfair market practices of the informal sector.<sup>33</sup> Often, whole families are involved in informal waste collection so that even children have to pitch in on roads and landfill sites. Poor education thus runs like a common thread through the "sector", which is characterized by child labor and school absenteeism, frequently resulting in a perpetual vicious circle over generations.<sup>34</sup>

Where waste pickers have no official status and their work is not legally recognized, they become an easy target for harassment and exploitation by public officials or middlemen. Furthermore, there is the risk of fines due to the sale of illegally acquired waste or job loss due to impeded access to recycled material dealers, not to mention price fluctuations that make a reliable income impossible.<sup>35</sup>

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28 <https://plasticbank.com/>

29 Interview with Sujoy Chatterjee, Managing Director of SOCEO gGmbH, February 26, 2020

30 GA Circular (2019)

31 Ibid.

32 Interview with Sujoy Chatterjee, Managing Director of SOCEO gGmbH, February 26, 2020

33 Interview with Agnes Bünemann, Managing Director of Cyclos GmbH, February 13, 2020, and with Sujoy Chatterjee, Managing Director of SOCEO gGmbH, February 26, 2020

34 Cf. Apacarna (2016)

35 Solid Waste Management Association of the Philippines (n.d.)

# INTERVIEW



Habibul Mondol,  
Kalibazar on Sagar Island  
in West Bengal  
(India)

WASTE PICKER

**How old are you? Do you have a family?**

I am sixty years old, married and have a son.

**Where did you go to school?**

I come from a very poor family and could not afford an education. I therefore never went to school.

**What is a typical workday for you?**

I start my day at 6 am and cycle through various villages to collect the waste. My collection round ends at around 1:00 pm; I then go to a middleman to sell the plastic.

**What is the appeal of collecting plastic to you, even though you could often make more money from other types of waste, such as metal?**

Because I have no education, I am forced to collect waste as a source of income. I collect plastic because this is what the middlemen are looking for the most. However, I only collect the plastic that is of interest to the middlemen.

**Where do you collect the plastic waste?**

I collect the plastic waste from private households and shops at marketplaces. Sometimes I borrow a small sum of money from the local middlemen, which I use to buy

the plastic waste from the households. Then I sell the collected garbage at a small profit to the dealer and pay back the loan. The dealers have their own fixed rates for the different types of plastic waste. This determines how much I earn per kilogram.

**How much plastic do you collect per day on average and how long does this take?**

I can collect between 10 and 20 kilograms per day with eight hours' work.

**With which plastic items can you make the most money?**

The highest prices can be got for PVC pipes, which can be sold for 20 Indian rupees per kilogram, and with PP items<sup>36</sup>, which I can sell for 16 Indian rupees per kilogram.

**Who in your environment is mainly involved in waste collection? Do you notice gender-specific differences? Are children or elderly people also involved?**

In my environment, only adult men and a few elderly people like myself are involved. I don't know of any children in our area who collect waste.



## “We get no recognition”

Which problems are you confronted with in your day-to-day work?

I have to cycle long distances the whole day long to the villages with my heavily loaded bicycle cart. This tires me out a lot. Sometimes, I have to go without food for longer periods during the day as no one sells food in these villages. As I am getting older, the day-to-day work is taking a heavy toll on my health. At the same time, this work is the only possibility I have to support my family financially. But even this income is not enough to cover our basic expenses. For this reason, I always have to take out loans at high interest rates to be able to cover additional expenses.

Are there opportunities for you to come together with other waste pickers in cooperatives to demand your rights or improve your working conditions?

Where I work, all the waste pickers work independently.

What would you need in order to improve your working conditions and who could support you in this?

A motorized vehicle together with initial capital would make my day-to-day work much easier – I would thus have the possibility to earn more. But I don't know who could support me in such matters.

As a waste picker, you perform very important work that makes an important contribution to environmental protection. Is the value of your work also recognized by Indian society?

Not really. We don't get any recognition, neither from the local government nor from the village residents.

What would be necessary in your opinion to improve the standing of waste pickers in India?

I hope that one day, with some support from the government, we get back from society what we have contributed. They could, for example, support us in purchasing these motorized vehicles or help us with start capital that alleviates our hardship and helps us to increase our income.

# THE INFORMAL SECTOR – A COMPARISON BY COUNTRY

## INDIA

India produces approximately 25,940 tonnes of plastic waste<sup>37</sup> every day, but just 60% of this plastic waste is recycled. 95% of this recycling is made possible by the informal sector<sup>38</sup>, which, based on estimates, consists of up to 1.5 million waste pickers, with approximately 300,000 in Delhi and 135,000 in Mumbai alone.<sup>39</sup>

The National Environment Policy (2006) and the National Action Plan for Climate Change (2009) both recognize the informal sector as an integral part of the recycling system and emphasize the need to formalize the sector through associations.<sup>40</sup> Furthermore, in 2015, the Ministry of Environment and Forests adopted new regulations for waste management, the Solid Waste Management Rules, plus an official definition of waste pickers, giving them priority for waste collection over municipal authorities.<sup>41</sup>

## PHILIPPINES

Over 2.7 million tonnes of plastic waste are produced in the Philippines every year, of which just 25% is recycled.<sup>42</sup> The informal sector accounts for approximately 2% of the urban population.<sup>43</sup> In Quezon City, the informal sector recycled over 141,800 tonnes of waste in 2010, the formal sector just 15,600 tonnes.<sup>44</sup> It can therefore be assumed that the informal sector also makes a much greater contribution percentagewise to plastic recycling.

Since 2010, the Philippine government has been endeavoring to strengthen the informal sector and recognize this as a partner for supporting and implementing the 3R strategy introduced in 2001 for reducing, reusing and recycling waste and to make it easier for waste pickers to gain access to secure living conditions, regular employment and social services.<sup>45</sup>

## INDONESIA

Up to 24,500 tonnes of plastic waste are produced in Indonesia every day.<sup>46</sup> Only 39% of the plastic waste is even collected and just 10% recycled. At 15%, a large proportion of waste recycling in Indonesia as well is covered by the informal sector, while formal recycling systems collect just 5% of the waste.<sup>48</sup> It is estimated that there are some 40,000 waste pickers in Jakarta alone.<sup>49</sup>

Since 1992, the Indonesian government has recognized the importance of waste pickers for environmental protection and supports their organization in associations and cooperatives.<sup>50</sup> At the start of 2020, the country presented an action plan<sup>51</sup> with the objective of reducing the plastic waste in its waters by around 70% in the next five years and to be free from plastic waste by 2040. In addition, plastic waste collection and the recycling rate are to be doubled to 80% and 20% respectively.<sup>52</sup> To achieve these ambitious targets, investments to strengthen the informal sector were also announced.<sup>53</sup>

37 See Venkatesh, Kukreti (2018)

38 Ellen MacArthur Foundation (2016)

39 Linzner, Lange (2013)

40 Cf. Apacarna (2016)

41 Global Alliance of Waste Pickers (2016)

42 Ocean Conservancy, McKinsey Center for Business and Environment (2015)

43 Rodriguez, Dyan Mabunga (2018)

44 Heinrich Böll Stiftung, BUND (2019)

45 Resolution Adopting the National Framework Plan for the Informal Sector in Solid Waste Management (2010)

46 World Bank (2019a)

47 World Economic Forum (2020a)

48 World Bank (2018)

49 Shunsuke et al. (2014); Linzner, Lange (2013)

50 Ibid.

51 Plan of Action on Marine Plastic Debris 2018-2025 (Presidential Decree No. 83/2018)

52 World Economic Forum (2020a)

53 Ibid.

# INTEGRATION APPROACHES FOR THE INFORMAL SECTOR

Essentially, there are three different ways that waste pickers can be integrated into a waste management system:

## Formalization via the organization of waste pickers in unions, associations or cooperatives:

An example of this type of integration is the SWaCH cooperative in Pune (India), which can be traced back to the KKP labor union founded in 1993 with members from the waste picker community and waste buyers. Today, the labor union has over 9,000 members, who pay an annual membership fee plus a life insurance premium. Each union member also receives an official ID card from Pune Municipal Corporation (PMC) that enables access to various benefits such as interest-free loans or educational scholarships. The union also campaigns for improved working conditions for waste pickers, recognition of their contribution to local waste management and for reliable access to waste. The adoption of new regulations with regard to waste separation, house-to-house collections and waste recycling in 2000 finally smoothed the way for the foundation of SWaCH in cooperation with the PMC to integrate waste pickers into house-to-house collections. Today, SWaCH has over 3,500 waste pickers and recycles over 70,000 tonnes of waste from over 800,000 households every year.<sup>54</sup>

## Integration of waste pickers by community-based organizations or small enterprises:

Barangay Potrero – Until 2015, one of the largest barangays<sup>55</sup> in Malbon City (Philippines) was dependent on a private waste management firm that not only cost the municipality more than average but did not even manage to collect the waste from all households. The waste collection was subsequently taken over by a Ladies Brigade<sup>56</sup>, consisting of 38 local, previously

informal waste pickers. Since then, the waste pickers go from door to door every day between 6:00 am and 9:00 am to collect the waste from private households, for which they each receive a monthly income of approximately 115 US dollars from the municipality. By way of comparison, the monthly income of an informal waste picker in the same region is a mere 20 to 40 US dollars. Furthermore, the waste pickers can keep the profit from recyclable materials and are entitled to health care, life insurance and scholarship grants.<sup>57</sup>

## Employment of waste pickers as employees in the formal sector by the public authorities and at private waste companies:

An example of this is the Socially Responsible Recycling Business Banda Aceh Plastic Recycling in Banda Aceh (Indonesia). This is a private company that cooperates with intermediate dealers and waste pickers from the Waste Recycling Association of Banda Aceh and also employs 17 previously informal waste pickers. The waste pickers and the people directly employed at the company receive the training required for recycling, a regular income that is the same as that of the waste pickers employed by the municipality, vacation time and access to free schooling, among other things.

54 <https://swachcoop.com/>, interview with Sujoy Chatterjee, Managing Director of SOCEO gGmbH, February 26, 2020

55 Barangays are the lowest level in the administrative structure in the Philippines; their structure is similar to that of a village or of a neighborhood or urban district

56 GAIA (2019)

57 Ibid.

# INTERVIEW



Agnes Bünemann,  
Managing Director

CYCLOS GMBH

## What rules does the informal sector in waste management follow?

The informal sector works to the principle of **cash for trash**. The waste collection is very selective, as only waste that can be monetized is collected. Alongside metal tins and paper, the only type of plastic that is relevant for the sector is PET bottles. This is precisely the problem: For a circular economy and extended producer responsibility systems, referred to as EPR systems, to work, all types of waste need to be collected.

## What is required for the integration of the informal sector?

The formalization of the sector is very important for the establishment of functioning waste management systems. This requires a general change in the sector mindset toward a cash-for-service principle – i.e. away from a material-oriented way of thinking to a service-oriented one. Binding working conditions must be created for waste pickers either as independent business partners or as employees. All of this is a basic requirement for the transformation of the informal sector. It is only when an actual monetary added value is seen in

the formalization of the sector that an understanding can be developed that all types of waste need to be collected, correctly sorted and recycled and/or disposed of.

## What are the advantages of the integration for waste pickers?

A regular income, the minimization of health risks and a resulting improvement in their social status and the business practices through purchase guarantees for the waste, for example. It is important in this connection that people currently working in the informal sector have the possibility to seek legal advice in relation to employment contracts, working conditions and their rights as employees – be it from organizations, associations or labor unions.

## Who in your opinion is responsible for the integration of the informal sector?

As waste management is not a self-financing system, additional financing is required. In the case of government players (municipalities, local administrative units), we know that these often do not have sufficient funding



# Cash for trash or as a service?

available. One possibility for establishing and financing sustainable waste management systems is thus extended producer responsibility systems (cf. the chapter “In the Circular Economy”). The most important requirement for this is the registration of the employees in the sector and the collection and recycling of the waste. However, as EPR essentially only comes into play for certain types of waste, such as packaging, electrical waste or batteries, for example, and compostable waste sometimes accounts for 60% of the total waste, a combination of EPR and municipal initiatives appears to be desirable.

*Are there already countries in the Global South that have taken on the challenge of integrating the informal sector? Do you see certain success factors regarding the integration of the informal sector?*

There is no magic solution! This is due, in particular, to the different regional conditions and different political framework conditions. What works in one country will not necessarily be as successful in another country. Well into the 1980s, there were still many informal scrap dealers in Germany that were only then formalized by law.

In Chile, there is an extended producer responsibility law (Ley de Responsabilidad Extendida del Productor y Fomento del Reciclaje) that obliges private waste management companies operating as part of the EPR system to register electronically and provide information on the type, quantity, origin and destination of the collected waste. This also applies for waste pickers whom the government wants to integrate into the EPR system. In Ghana, there are civil society initiatives that have started to organize the collection of PET bottles in cooperation with waste pickers, municipalities and other stakeholders. EPR systems essentially require legal framework conditions from the legislator – numerous companies are also ready to give a corresponding undertaking.

# INTERVIEW



Sujoy Chatterjee,  
Managing Director

SOCEO GGMBH

[What are the main objectives of SOCEO and what do you want to achieve with your project in the Sundarbans?](#)

SOCEO is an ideas company that is involved in the area of social innovation and entrepreneurship. As part of the project entitled “Combating Plastic Pollution in the Sundarbans, India” funded by the Röchling Foundation, SOCEO is developing and implementing sustainable business models for the collection of plastic waste in rural areas that incorporate the informal sector, community-based organizations as well as government initiatives. The aim is to develop a transfer package, train local people on the use of this transfer package and ultimately to pass this on to other interested organizations.

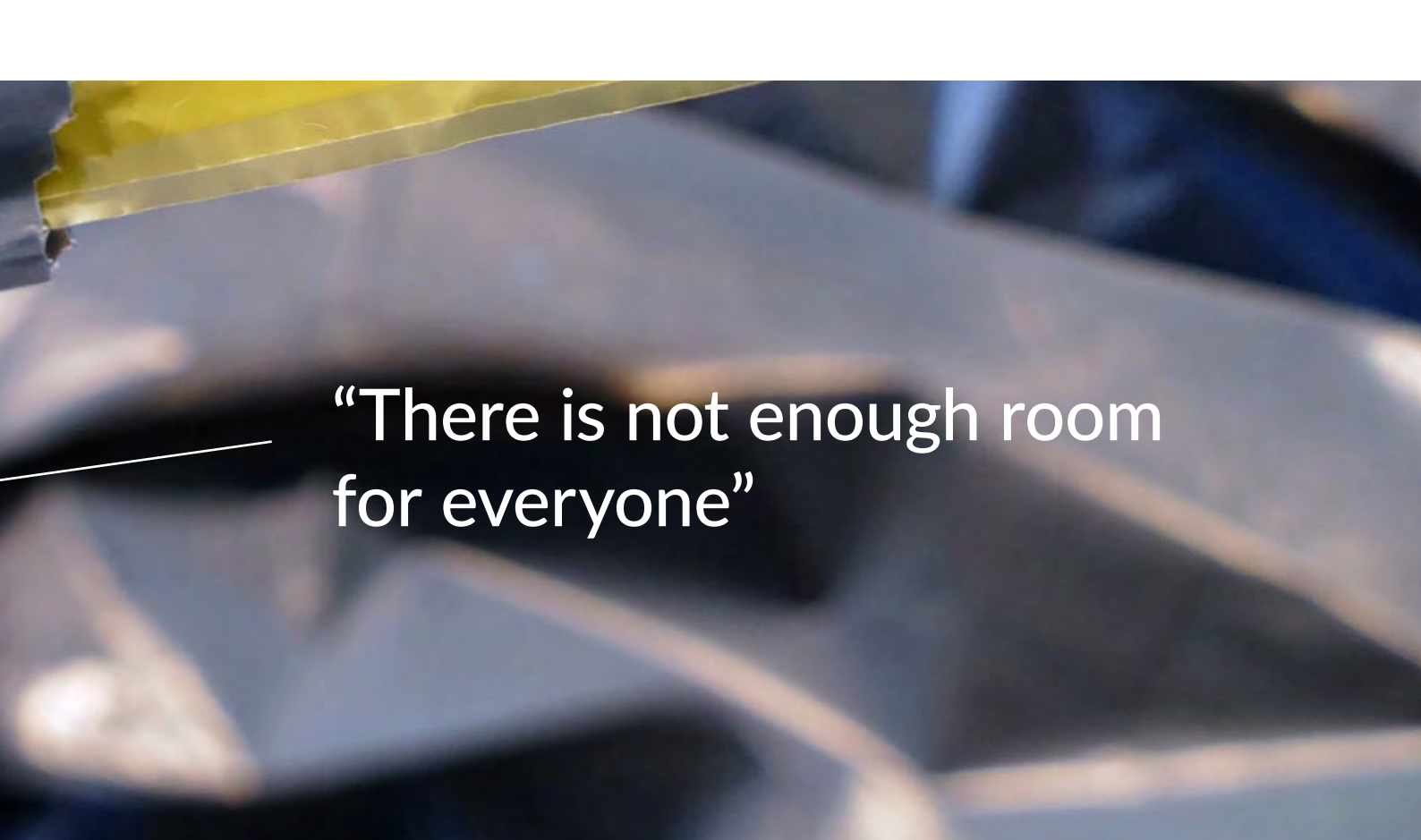
[How has your project developed so far and what is the current status?](#)

Since 2018, we have been analyzing the quantity and type of plastic waste produced as well as any existing waste collection mechanisms at selected locations. Our studies in the Sundarbans have shown that the amount of plastic waste varies between the individual islands. Where we carried out the studies, community-based

organizations were set up that undertook campaigns, community consultations and dialogs with the local administration as the basic requirement for the creation of a plastic waste management system. After successfully testing a number of models, we now want to expand these models to a larger number of locations.

[As part of your project, you work together with the informal sector. Would this not also be a meaningful approach for the formal waste management sector to increase efficiency?](#)

At first glance, the integration of the informal sector into the formal sector appears to be a meaningful approach. However, in India there is no reliable data on the total number of waste pickers. It would be a huge challenge for the formal sector to incorporate all these people. And because not all of them can be integrated, the question arises as to what criteria should be used when deciding on who should be integrated. From an economic point of view as well, the integration is difficult as it appears impossible to guarantee such a large number of waste pickers a fair income.



# “There is not enough room for everyone”

Which approaches are already available for formalizing the informal sector and what makes these approaches successful?

There are several successful approaches, in urban areas in particular. Some cities issue ID cards for the waste pickers, giving them official recognition from the city and access to various benefits. Furthermore, there are successful examples of labor unions or cooperatives that make it easier for the people concerned to fight for their rights and improve their working and living conditions.

Where do you see the greatest obstacles for successful integration of the informal sector?

The greatest obstacle is the lack of education. If we don't manage to guarantee a higher level of education to the most marginalized part of our society, waste pickers will continue to have a vulnerable position.

Can you give us a good practical example of a comprehensive waste collection system involving the informal sector?

One of the best-known examples in India is SWaCH in Pune, a cooperative of over 3,500 waste pickers in the form of a social enterprise.

# INSIDE THE CIRCULAR ECONOMY

The long road  
to extended  
producer  
responsibility



# THE FILLER MUST PAY

## The concept of extended producer responsibility

Growing prosperity leads to rising consumption. More and more is being produced – including plastic packaging for consumer goods. The basic question thus arises as to who is responsible for setting up and financing waste management systems. The municipalities, consumers or the private sector?

This question has been answered in Germany with what is known as a dual system. This is based on the principle of extended producer responsibility (EPR), which holds municipalities but also companies in particular responsible for ensuring that their products are recycled where possible or disposed of.<sup>58</sup> This system is financed through licensing fees paid by every company that fills packaging and places it on the market. In this way, the participating companies – and through the prices indirectly the consumers as well – make it possible to finance the infrastructure required for the regulated management and treatment of packaging waste.

The application of this principle in emerging and developing countries is considered to be a decisive factor for setting up the urgently required waste management systems. Extended producer responsibility would strengthen the legal and financial obligation of companies benefiting from the rising consumption to participate in the disposal and recycling of plastic packaging and take the burden off municipalities.

So that countries of the Global South can introduce EPR systems, they need to create a national legal framework that obliges producers to take more responsibility for their products and to ensure that these products remain in a circular economy. Furthermore, they must increase the awareness of the public for the necessity of waste separation by means of information campaigns and educational measures. In the same

breath, access to controlled waste disposal must be improved to counteract illegal dumping and the burning of waste.<sup>59</sup> The integration of the informal sector<sup>60</sup> and investment in recycling technologies<sup>61</sup> also play an important role. An EPR system can only function in the long term if there is an interconnected system for separation, collection, recycling and disposal.

### UNRESOLVED CHALLENGES

Extended producer responsibility is based on statutory provisions that in many EPR systems so far relate only to the disposal of plastic packaging but not to the reduction of plastic packaging or to the use of recyclates. Supplementary legal framework conditions are required to account for this. The EPR systems also do not cover emissions due to microplastics. This includes, for example, the wear from automotive tires. According to estimates, in Germany alone this represents roughly a third of all microplastic emissions.<sup>62</sup>

The growth of e-commerce is also a challenge. Consumers now have much better access to retailers abroad. However, in many cases these retailers do not comply with the EPR regulations in the country of sale. This leads to what is known as free-riding, meaning that the necessary EPR fees are not applied to the products, or not to the full extent. In addition, take-back obligations are not complied with; this results in lower collection rates for used products.<sup>63</sup>

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58 Grüner Punkt (2020)

59 Bauske (2019)

60 Interview with Agnes Bünemann, Managing Director of Cyclos GmbH, February 13, 2020

61 Grate, Fuhr (2019). Heinrich Böll Foundation and BUND (2019)

62 Bertling et al. (2018)

63 OECD (2018)

# INTERVIEW



Helmut Schmitz,  
Director of Communication  
and Public Affairs

DER GRÜNE PUNKT –  
DUALES SYSTEM  
DEUTSCHLAND GMBH

**How would you sum up extended producer responsibility (EPR) in one sentence?**

EPR is the holistic responsibility of companies that make products and place them on the market. This means that producers are responsible for recycling their products when they become waste after use and must bear the costs and pay for the damage due to this waste.

**How did extended producer responsibility (EPR) come about in Germany and beyond?**

Producers have always been responsible for ensuring that their products work properly and are safe. At the start of the 1990s, producer responsibility for products in Germany was extended in the area of packaging to include the phase after consumption; at the time, this development was unique worldwide. Any company putting packaging into circulation – i.e. the filler – was also financially responsible for its take-back, sorting and recycling. Other EU Member States quickly adopted this pioneering principle by enacting similar packaging laws. To harmonize national measures, the EU introduced the extended producer responsibility for packaging for all EU countries with the European Packaging and Packaging Waste Directive in 1994.

**In theory, an effective EPR system contributes to the objectives of the circular economy. But what does this look like in practice in Germany and in the EU?**

The EU-wide EPR regulations already exert pressure on producers to design their packaging in a forward-looking and sustainable manner with the circular economy in mind. Even though the level of knowledge and expertise nowadays is much more advanced, the establishment of the circular economy is taking place very slowly particularly with regard to plastic.

In the German Packaging Act amended in 2019, what are known as the dual systems in Germany are obliged to set license fees based on environmental criteria. The better a material can be recycled, the lower the license fee. It thus gives producers additional economic incentives to contribute to the circular economy.

**EPR is aimed in particular at players that fill packaging. How though are packaging manufacturers held accountable?**

To increase the responsibility of companies, the EU Commission also commissioned two studies in which recommendations were made for the further development of the packaging market: “Good” packaging should become cheaper EU-wide, while “bad” packaging should become more expensive or no longer receive approval for the market.

However, the basic problem with plastic is a level up: Plastic waste has no value. The raw materials for the production of plastic are cheap, so the production of primary plastic is also cheap. At the same time, the market for plastic is highly supply-driven. These two factors lead to an oversupply of cheap new plastic and lightweight plastic. A reversal of this situation is urgently required so that they are included in the circular economy. In order to achieve this, the competitive disadvantage associated with the use of recyclates must be offset, for example by a tax on primary plastics. A binding minimum utilization rate for recycled plastic to fuel demand is also conceivable.

# Valuable(?) material: Plastic

## How is EPR taking shape in the Global South?

In contrast to Germany and Europe, consumers in the countries of the Global South often do not have access to a managed waste disposal system or there are no or hardly any holistic statutory provisions on proper disposal. It is therefore not possible to collect data on waste disposal. This in turn impedes the recycling of the waste. This problem is exacerbated by the export of secondary raw materials from industrial nations.

## What specific measures are required in your opinion for the initiation and implementation of extended producer responsibility in the countries of the Global South?

First of all, clear legislation on waste management must be enacted that is based on good practice from other countries and is individually adapted to the local conditions. For this purpose, waste companies with experience in EPR must make their expertise publicly available. In a second step, non-recyclable and thus worthless miniature packaging, such as sachets, must be banned. This would also counteract the increasing devaluation of plastic.

## ON THE RISE, BUT NOT IN STEP

International extended producer responsibility

In the **European Union (EU)**, what is known as the Circular Economy Package regulates waste law.<sup>64</sup> Member States are obliged to introduce EPR systems for packaging, batteries, end-of-life vehicles and electrical and electronic equipment. Some EU countries have introduced additional regulations.<sup>65</sup>

Worldwide, the majority of **OECD countries** and many **emerging countries** have EPR laws. The regulations differ significantly.<sup>66</sup> There is no federal law in the USA. The individual states have their own policies.<sup>67</sup> In Central and South America, several countries including Chile, Mexico, Brazil, Argentina and Columbia have introduced EPR systems for waste electronic equipment.<sup>68</sup>

There are also big differences in **Asia**. In Japan and South Korea, there are established EPR regulations that are consistently enforced.<sup>69</sup> China, India and Indonesia have just started to develop EPR programs. Malaysia and Thailand are going in the direction of EPR for waste electrical equipment but are relying on the voluntary participation of producers.

64 DNR (2018)

65 Ibid.

66 Ibid.

67 Ibid.

68 Ibid.

69 Korea Environmental Institute (2010)

An aerial photograph of a large island composed entirely of plastic waste, including bottles, bags, and other debris, floating in the middle of a vibrant blue ocean. The text is overlaid on the image.

# PART OF THE PROBLEM AND THE SOLUTION?

The activities of business  
and its networks



# MORE NETWORK THAN WORK?

## What companies do better in alliances... and what not

They are chemical giants such as BASF, Dow or Covestro. They are global foodstuffs, beverages and tobacco corporations such as Nestlé or Coca-Cola. They are international discounters and chain stores such as Walmart or the German Schwarz Gruppe with its Lidl and Kaufland brands. They are all engaged in not just their own individual company-led initiatives to improve the disposal and recycling of plastic waste in the Global South. They have also joined forces in networks – in some cases with players from the civil society and political sectors.

Cross-organization and cross-sector networks can pursue a variety of objectives:

1. Pooling of financial resources to be able to support major projects in a more effective and longer-term manner.
2. Consolidation of competencies and decision-making options to align government, economic and civil society action.

On the other hand, there are activities initiated or supported by certain players – combined with the advantage of swift entrepreneurial decisions.

Both forms of involvement can frequently be found when it comes to the support of systematic waste management in Asia.

Henkel, for example, is a member of the Alliance to End Plastic Waste (AEPW), but is involved in parallel on its own initiative in a comprehensive, long-term cooperation with the Canadian social enterprise Plastic Bank, which has set out to make the materials collected by waste pickers in the Global South marketable worldwide as what is known as social plastic.<sup>70</sup>

In many cases, the involvement in cross-industry and cross-sector networks is seen by the initiators and members not as an alternative to their own projects, but rather as a supplement to the respective corporate activities.

The relevant networks meanwhile often meet with criticism from civil society. Detractors say that the jointly raised resources are low when measured against the economic means of the member companies and that the good publicity from the involvement simply conceals the fact that the companies are at the same time not investing enough in changing their respective business models to prevent plastic waste.

For example, when the AEPW was founded, the Dutch NGO Recycling Netwerk Benelux calculated that the companies would together contribute 1.5 billion US dollars over five years for projects against plastic waste, but at the same time invest a total of 89 billion US dollars in expanding their production capacities up to 2030.<sup>71</sup>

Such a comparison is clearly misleading. Nevertheless, in order for the corporate commitment to be perceived as credible, it is regarded as essential that the involvement in networks and as sponsors is in a balanced proportion to their own sustainability strategy and the associated measures.

Against this background, those company-led initiatives that integrate socially relevant action into the value-added chain of the respective company are particularly interesting.

# INTERVIEW



Dorothea Wiplinger,  
on the launch of Project  
STOP

BOREALIS AG

Borealis AG, based in Vienna, is one of the world's leading petrochemical companies and one of the largest producers of polyolefins. The company has around 6,900 employees. Among other things, Dorothea Wiplinger is responsible for the company's CSR strategy. She initiated Project STOP, which supports municipalities in Indonesia in setting up a financially feasible waste management system.

[Why did you start a new initiative in Indonesia with Project STOP? What was the driving force behind this for you?](#)

Borealis has already been involved in the transformation of the plastics industry into a genuine circular economy for many years. As a major manufacturer of raw materials for plastic products, we are aiming for a leading role in this field and are investing accordingly. For example, to date we have already purchased two recycling companies, one in Germany and one in Austria. However, it is also clear that if we want to tackle the problem of maritime pollution decisively, we must also address the problem where the majority of it enters the oceans: In Asia. In 2016, I started researching suitable projects that we could support. At that time, I was unable to find anything that satisfied our expectations and criteria. For this reason, we took the initiative ourselves and set up Project STOP.

[What was missing?](#)

We were convinced that a sustainable contribution can only be achieved by bringing about a systemic change. Tackling merely part of the problem isolated from the overall system, for example just the topic of waste col-

lection, beach cleanup or consumer information, will not change the system as such. To set up waste management systems under difficult conditions, you need to intervene on all levels and more or less in parallel: On a political and regulatory level, with regard to long-term financing, the technology, informing people and stimulating market demand for recyclates. Such a holistic approach was nowhere to be found at that time.

[But cross-sector networks and alliances have been around for a long time in this field..](#)

Frankly speaking, we had got to the point where we no longer wanted to discuss the problem at round table meetings and conferences or carry out academic analyses just for the sake of it. We no longer wanted to just talk the talk, we wanted to walk the walk. The approach of taking the initiative and implementing it with just a few partners therefore appeared to be the most effective to us.

[Which conceptual considerations formed the basis for setting up Project STOP?](#)

It was clear to us that we would not be able to implement such a far-reaching change immediately in an



“We don’t want to just talk the talk, we want to walk the walk!”

entire country or in multiple countries at the same time. For this reason, we decided to focus on a specific country, in this case Indonesia, to set up a sustainable and financially feasible waste management system there – together with the city administration. The objective was to develop a prototypical model for a specific city that could then be scaled.

It was similarly clear to us that exporting standard solutions from Europe would not work, and that we would have to be present on the ground instead; learning by doing, as it were. For this purpose, we set up a team of national and international experts that developed a model together with the local authorities and the municipality that really does suit the local conditions. After 18 months now, we have already been able to supply a large part of Muncar City with a functioning waste collection and recycling system and thus create not only better living conditions but also 90 new jobs.

#### Has this path turned out to be right one?

The project is still a work in progress. But currently there is every indication that our approach is working. In February of this year, we started working with two additional cities, Pasuruan and Jembrana, both in Indonesia, where we will be able to build on the experiences gained in Muncar. In the meantime, the ministry responsible has even asked us to transfer the concept to additional cities. The potential for scaling therefore does not just exist in theory.

In Project STOP, companies such as Nestlé, Veolia, the Schwarz Gruppe or the Alliance to End Plastic Waste are now also involved in addition to Borealis. Have you thus not become one of those slow networks that you wanted to avoid?

Project STOP is not a partner network; instead, it is a program that is financed by a few selected, committed companies and is guided by a small steering committee. Our project management remains lean and we ensure that we remain able to act quickly.

#### What can a company do better on its own? What works better in large networks?

It all depends on the respective objective: If you want to have a particularly powerful voice in a political dialog or substantial financing, then you need big alliances. If, by contrast, you want to develop and implement something quickly, it is often better to start off with a few selected partners whose expertise is needed for the implementation.

<https://www.stopoceanplastics.com/>

<https://www.youtube.com/user/borealistv>

# INTERVIEW



SCHWARZ  
GRUPPE



Hannah Nicklas,  
Head of REmove  
action area

Michael Löscher,  
REsearch  
action area

The Schwarz Gruppe with its two retail divisions Lidl and Kaufland is one of the largest international retail companies. The group of companies has around 430,000 employees and generated a turnover of 104.3 billion euros in 2018. In the field of plastics and the circular economy, the Schwarz Gruppe is attracting attention due to the fact that it has committed to a comprehensive plastics strategy going by the name of REset Plastic (reset-plastic.com) and has also founded its own waste disposal and recycling division comprising the companies PreZero and GreenCycle.

Hannah Nicklas heads the REmove action area within the plastics strategy via which the Schwarz Gruppe supports the elimination of plastic waste from the environment. Michael Löscher is responsible for the REsearch action area, which invests in innovative solutions and enters into research and development cooperation projects.

*Where do you see the biggest challenges overall, particularly with regard to the biggest pollution emitters in the Global South?*

**Hannah Nicklas:** The waste disposal and recycling infrastructure cannot keep pace with the breathtaking economic upturn in these countries. However, with regard to this finding, we must not forget that it also took us decades here in Germany to develop an awareness for the separate collection of waste and set up the required infrastructure. And we are still a long way from optimum recycling rates.

To achieve systematic and comprehensive waste management in the emerging Asian countries, we would need enormous investments within a very short period of time.

Such investments often do not pay off under the current conditions though. This is part of the reason why our “Western” solutions cannot simply be exported.

*Why is the Schwarz Gruppe involved in Asia?*

**Michael Löscher:** The Schwarz Gruppe as a retail company is itself not active in Asia. We have no markets there and we are currently also not operationally active in this region with our recycling division PreZero. However, we have specific expertise; we would like to contribute this even where we are not present on the market. After all, the plastic problem is ultimately a global challenge for all of us.



# “It is about learning together”

How precisely are you going about this?

**Michael Löscher:** In 2018, we initiated our plastics strategy going by the name of REset Plastic. It consists of the five action areas REduce, REdesign, REcycle, REmove and REsearch. In this way, we account for the entire value-added chain. A large part of these activities involves internal improvement opportunities. As an internationally operating retail group, we put a lot of plastic packaging into circulation. Our objective is to return this to the value-added cycle.

**Hannah Nicklas:** Our commitment to setting up waste management systems in the Global South is the responsibility of the REmove action area. We are convinced that it does not make much sense to fish plastic waste out of the ocean. The problem must be solved at its source, on land, along the rivers and on the coasts. However, this will not work by exporting ready-made solutions to emerging and developing countries. For this reason, we support solutions that are developed jointly with players on the ground, such as Project STOP in Indonesia, where we are also currently setting up a comprehensive project with the organization One Earth – One Ocean e.V. Our colleagues at PreZero are active in Vietnam, but also in the Baltic Sea with the WWF.

Which criteria do you use to select the networks and projects that you get involved in?

**Hannah Nicklas:** In the case of the REmove projects, we don't just want to remove waste from the environment in the short term. Our objective is to allow our partners to benefit from our expertise in the long term. For example, we want to hand over the river cleaning project with One Earth – One Ocean e.V. in Bekasi to local players after three years. In addition, it is extremely important to us that the collected waste is recycled.

**Michael Löscher:** With regard to the involvement in networks, we always consider whether we can achieve a significant impact in the respective network with our resources. A global problem naturally always requires cooperation and partnerships. Admittedly, the truth here is that many platforms and conferences conduct the same discussions in parallel. We look for cooperation projects where we can actually get involved and contribute our potential. When implementing some solutions, this can indeed sometimes be achieved more quickly working alone.

# EXAMPLES OF COMPANY PROJECTS AND NETWORKS



## **PRAISE INDONESIA**

PRAISE (Packaging and Recycling Association for Indonesia Sustainable Environment) Indonesia had already existed as an informal initiative for around ten years. In 2018, it restructured to become a joint initiative consisting of Tetra Pak, Danone, Coca-Cola, Unilever, Nestlé and the Indonesian foodstuff giant Indofood.

The history of this organization is remarkable: Six major international corporations, each with its own massive output of plastic packaging, joining forces to sponsor what was originally a civil society initiative.

PRAISE first and foremost endeavors to set up a system of extended producer responsibility (EPR) – i.e. a collection system that is financed by the companies that place the packaging on the market. The sponsoring organizations are thus pursuing the aim of setting up a type of dual system in Indonesia through PRAISE.

<https://praiseindonesia.com/>

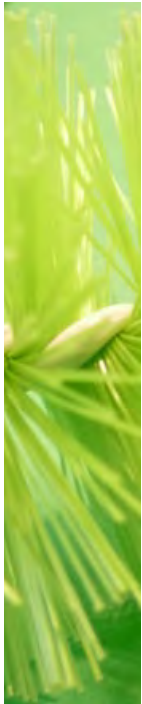


## **ALLIANCE TO END PLASTIC WASTE (AEPW)**

The Alliance was launched in 2018 by the CEOs of international chemical groups and now consists of around 40 companies from various different sectors. The Alliance describes itself as the most comprehensive initiative of its kind across the value chain. The member companies have pledged to invest at least 1.5 billion US dollars in various projects and initiatives within 5 years.

The Alliance has defined four fields of action: Infrastructure Development, Education and Engagement, Innovation and Clean Up. The activity of the collaborative organization is thus in no way limited to just setting up infrastructures in the Asian hot spots. At the same time, the main activities and funding of the AEPW to date are dedicated to this field of action – including a project being undertaken by the organization “Renew Oceans” to support waste pickers on the Ganges and Project STOP in Indonesia.

<https://endplasticwaste.org>



## PROJECT STOP

Project STOP was launched in 2017 by the Austrian plastics manufacturer Borealis. The initiative supports cities in setting up waste management systems that can be accessed by all households. Project STOP provides experts on waste management, recycling, organics management and policy advisors. The regional focal point for its activities is Indonesia.

In addition to Borealis and the founding partner SYSTEMIQ, Nestlé, Nova Chemicals, Borouge, the Norwegian Embassy and the Alliance to End Plastic Waste (AEPW) have joined as strategic partners. Each of these companies is represented with a seat on the steering committee of the project. Supporting and technical partners are the Schwarz Gruppe, Veolia, Hewlett Packard and Sustainable Waste Indonesia.

Project STOP is currently working in three Indonesian cities. The activity of the team in the town of Jembrana on Bali is fully financed by the AEPW.

<https://www.stopoceanplastics.com/>



## PREVENT WASTE ALLIANCE

In 2019, the German Federal Minister for Economic Cooperation and Development, Gerd Müller, set up the PREVENT Waste Alliance. It consists of over 30 organizations from business, science, civil society and public institutions. Members include major groups such as Nestlé, Coca-Cola or Veolia, as well as medium-sized enterprises such as Werner & Mertz (Frosch). Plus municipal umbrella organizations, industry associations such as the “Bundesverband der Deutschen Entsorgungs-, Wasser- und Rohstoffwirtschaft” (Federation of the German Waste, Water and Raw Materials Management Industry), nature conservation organizations such as NABU and WWF and universities and research institutes.

The work is divided into four topics: “Conserving resources”, “Achieving closed loops for packaging”, “Achieving closed loops for electrical and electronic waste” and “Improving framework conditions on a municipal level”.

In the PREVENT working groups, organizations from the Global South are directly involved.

The secretariat function is fulfilled by Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ).

<https://prevent-waste.net>

# INTERVIEW



Sascha Roth,  
Environmental  
Policy Officer

NATURE AND  
BIODIVERSITY  
CONSERVATION  
UNION (NABU)

**How important is better waste management in the Asian hot spots for dealing with the plastic problem?**

The core of the problem is identical worldwide: Economic activity relating to plastic is still linear, despite all the technological advances in recycling. This basic mistake is not a problem specific to the Global South. The fact that the majority of plastic waste enters the water in Southeast Asia is undisputed and requires swift action. But we can only eliminate the causes of this by moving from our linear economic model to a genuine circular economy.

**What can companies, government institutions and networks from the western industrial nations contribute to this as sponsors?**

The Asian part of the world can learn from the mistakes that we have made in dealing with plastic and waste. Knowledge transfer about technologies and meaningful incentive mechanisms for devising an environmentally friendly product stewardship are very important. Waste management must be organized as a shared responsibility between states and the private sector.

**What needs to be set up instead of well-intentioned international projects?**

A global waste regime, comparable with the Paris Agreement on climate change. The international companies that produce plastic packaging and put it on the market could definitely play an important role here. After all, the basis for such a regime would be a globally applicable producer responsibility. In other words, companies that put the packaging into circulation must also share in the costs for the disposal and recycling infrastructure. In Germany, this is called the Dual System and has been a matter of course for decades. Globally operating businesses need to face up to this responsibility all over the world.

**How do you rate the cross-sector networks that are forming to fight plastic waste?**

There is no doubt that global objectives require joint action from governments, industry and civil society. But this presupposes that these activities are absolutely binding, have clear-cut objectives and measure the effectiveness systematically. Unfortunately, many of the current network initiatives appear to me to be more along the lines of organized irresponsibility.



# “Organized irresponsibility”

One example: The Circular Plastics Alliance, in which practically all relevant companies have joined forces, promised in 2019 to increase the market for recycled plastics in the EU to 10 million tonnes by 2025. Sounds great. However, because all of these companies want to act in an economically efficient manner, they will focus on the most easily available plastics and possibly process them in meaningless applications just to achieve a mass objective. I do not expect increased investment in recycling infrastructures to result from this.

[What should companies take into account in particular when committing to an improved circular economy?](#)

Serious commitment differs from greenwashing by including clearly defined and quantifiable ecological criteria that are implemented in accordance with a clear-cut and publicly disclosed schedule.



A large circular metal net is shown from an aerial perspective, filled with a massive amount of plastic waste. The net is floating on the surface of the deep blue ocean. The waste includes various types of plastic, such as bottles, bags, and fragments, in many colors. The net's edge is visible, showing its metal structure and how it traps the debris.

# PARALLEL WORLDS

Why local solutions and global programs  
don't get together enough

# NO CHANCE FOR A ONE-SIZE-FITS-ALL APPROACH

Depending on your perspective, waste and waste disposal are a global problem with a local impact – or a local problem with a global impact.

In the majority of Asian countries that are considered to be hot spots for plastic waste pollution, the responsibility for the introduction of a systematic waste management system lies on the municipal level. The initial situations and the challenges to be overcome are correspondingly diverse and complex. This concerns the respective political and economic situation, the specific geographical and climatic considerations and the cultural prerequisites.

A far-sighted development cooperation has to refrain from exporting supposedly ready-made solutions to

emerging and developing countries. Viable and sustainable solutions only arise under the leadership of local players from government, business and civil society.

It's therefore not a surprise that there is no blueprint for waste management that could stem the flood of plastic in the Global South. The various local problem-solving approaches, initiatives and model projects usually only fit in with the global programs of public institutions in isolated ways. Long-term and holistic concepts for waste disposal are still missing.

## SUSTAINABLE WASTE DISPOSAL AS A GLOBAL OBJECTIVE

A number of international agreements and target agreements such as the **Sustainable Development Goals (SDGs)** and the **New Urban Agenda (NUA)** already deal with the topic of waste disposal and urge the global community to commit. SDG 11 (Sustainable cities and communities), for example, focuses on reducing the negative environmental impact of cities and on municipal waste management. SDG 12 (Responsible consumption and production) concentrates on the environmentally compatible disposal of all waste through prevention, reduction, recycling and reuse.

Furthermore, the signers of the NUA have committed to environmentally friendly waste management and the minimization of all waste.<sup>72</sup>

What is problematic is that these voluntary commitments are not legally binding and are implemented by the players in different ways. The **Basel Convention**<sup>73</sup> by contrast sets plastic waste in a legally binding framework with the objective of making global trading in plastic waste more transparent and easier to regulate. At the same time, it regulates safe waste disposal for human health and the environment. The Basel Convention is the only legally binding tool worldwide that specifically deals with plastic waste.<sup>74</sup>

The global achievement of these targets is being championed by various nation states as well as by international organizations and representatives from civil society:

72 United Nations Conference on Housing and Sustainable Urban Development (Habitat III) (2017)

73 Full title: Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal

74 Basel Convention (2019) Overview. <http://www.basel.int/Implementation/Plasticwaste/Overview/tabid/8347/Default.aspx> (retrieved on March 6, 2020)

The **International Solid Waste Association (ISWA)** supports globally sustainable and professional waste management. Together with the UN Environmental Programme (UNEP), ISWA published the Global Waste Management Outlook, the first comprehensive assessment of global waste management, in 2015. In addition, ISWA has set up regional development networks in order to reach economically underdeveloped regions more effectively. The objective of the networks is to promote sustainable waste management by carrying out activities and developing programs that are focused on the specific needs and challenges of the region in question. There are currently three regional development networks, each of which is represented by a member of the ISWA Board and holds network-internal events and workshops.<sup>75</sup>

**THE WORLD BANK**

The **World Bank** is one of the largest financial donors in the sector and since the year 2000 it has provided over 4.7 billion US dollars for over 340 waste management programs.<sup>76</sup> It supports, for example, municipal waste management in Tanzania through results-based financing. The payments are made on two levels to ensure that all parts of the value-added chain for waste receive an appropriate incentive to collect the waste and transport it to the final disposal site. This way of financing is intended to stop illegal waste disposal by trolley waste pickers in particular.<sup>77</sup> In Morocco, the World Bank supports the municipal waste sector with development policy loans. The objective of the loans is to support the government in reforming the municipal waste sector. Focusing on the improvement of systems instead of on training is more effective here and achieves better results in the long term.<sup>78</sup>



The **World Economic Forum** has for its part founded a platform called PACE (Platform for Accelerating the Circular Economy). It was set up in 2017 as a public-private cooperation under the joint chair of the CEO of Philips and heads of the Global Environment Facility and UN Environment. The Ellen MacArthur Foundation, the International Resource Panel, Circle Economy and Accenture Strategy act as knowledge partners. The World Economic Forum is the host and moderator of the platform. The main topics of projects include plastics, electronics, the food economy and the bioeconomy plus business model and market transformation in China, ASEAN, Europe and Africa.<sup>79</sup>

75 UNEP (2006)

76 World Bank (2019b)

77 World Bank (2014)

78 World Bank (2015)

79 World Economic Forum (2020b)

**UN Environment** set up the Global Plastics Platform in 2018; this supports countries and cities in defining strategies for reducing plastic pollution. The platform is based on the PACE platform hosted by the World Economic Forum and is designed to enhance it. The creation of this new platform is based above all on the realization that regulations are urgently required due to increasing plastic pollution in order to implement a circular economy for plastics and to ban them where feasible alternatives exist. The Global Plastics Platform focuses on single-use and disposable products.

Besides supporting policy makers, the platform will search for ways to change the design, production, consumption and disposal of plastics worldwide in harmony with the transition to a circular economy. Such efforts will embrace the identification of ways to reduce business and industrial waste. The platform recognizes the need to involve the public and key stakeholders so that regulations are understood and accepted. In the future, governments should work on increasing the awareness of these players before making changes to or introducing regulations.<sup>80</sup>



The **Ellen MacArthur Foundation** aims to prevent plastics from becoming waste and to fight plastic pollution at its source. It campaigns as part of its “New Plastics Economy” initiative for a fundamental rethink on how we design, use and reuse plastics. For this purpose, the foundation initiated the Plastics Pact, a network that brings together key players on a national or regional level to implement solutions for a circular economy for plastics.<sup>81</sup>

In 2019, Chile became the first Latin American country to introduce corresponding legislation, the Chilean Plastics Pact El Pacto Chileno de los Plásticos. This national initiative is intended to bring together local companies, governments and NGOs to work toward a circular economy for plastics. After the introduction of the French Pact in February 2019 and the British Pact in April 2018, the Chilean Plastics Pact is the third national initiative to join the foundation's network.<sup>82</sup>

80 Leone, Faye (2018); UNEP (2018)

82 Ellen MacArthur Foundation (2019)

81 New Plastics Economy <https://www.newplasticseconomy.org/projects/plastics-pact>; <https://www.ellenmacarthurfoundation.org/our-work/activities/new-plastics-economy>

# INTERVIEW



Dr. Johannes Paul,  
Advisor in the  
Department for Climate,  
Environment and  
Infrastructure

DEUTSCHE  
GESELLSCHAFT FÜR  
INTERNATIONALE  
ZUSAMMENARBEIT  
(GIZ) GMBH

## How is GIZ approaching the topic of waste and waste management systems?

The cooperation between GIZ and the countries of the Global South is based on government negotiations between developing countries and the Federal Ministry for Economic Cooperation and Development (BMZ). As part of this, the needs of the developing countries are substantiated and bilateral programs are developed and then implemented in cooperation with GIZ. The establishment of waste and circular economy systems currently plays a role in approximately half of all the GIZ project countries.

Advice on the topic of waste management is sought in the countries of Southeast Asia in particular but also in other parts of the world. The GIZ work is geared toward knowledge transfer, which is divided into technology transfer, the strengthening of national and regional institutions and the training of specialists on the implementation level.

## What are the challenges?

The needs of partner countries are varied, there are no simple solutions. One of the biggest challenges is the

comprehensive implementation of tried-and-tested measures. In many cases, the lack of specialists in particular significantly limits nationwide scaling of successful models. On top of this, local socio-economic factors such as cultural conditions or the varying levels of development in municipalities complicate the setting up of functioning waste management systems. Last but not least, the informal sector with its complexity represents a significant barrier to improving waste management.

## Where does the development cooperation reach its limits?

Even if the political will exists on the national level, local institutions do not have the expertise and specialist knowledge. A lack of environmental awareness by the parties involved further complicates the cooperation. On the municipal level, there is of course strong competition for funding for the different areas. Sadly, the topic of waste is not always at the top of the political agenda. The willingness of local players to cooperate is essential for the long-term establishment of the measures. There is where we sometimes reach our limits.

# “Blueprints are not enough”

## What role can cross-sector initiatives such as the PREVENT network play?

Cross-sector initiatives have the advantage that they can make key know-how and expertise on waste management systems available in bundled form. Furthermore, networks such as PREVENT adopt the role of the innovator that designs self-sustaining operator models and also raises the question of entrepreneurial responsibility and sustainability with respect to technology transfer and investment in infrastructure. In addition, cross-sector initiatives offer a platform for experimental exchange that can help to identify weaknesses in the system at an early stage. For example, in a pilot project of the PREVENT network with international company groups and the Indonesian government on extended producer responsibility (EPR), it was quickly realized that the expectations of the private sector did not match the developed framework plan for EPR on the government level. The solving of this unintended but now relevant development barrier offers a good example of the support provided by PREVENT.

## What must successful cooperation between development policy players such as GIZ and local players look like?

It definitely makes sense to pursue a multilevel approach in which the implementation of waste management takes place locally in the municipalities. GIZ can impart knowledge, advise on national legislation and strategies, help set up monitoring systems and support and involve civil society and other networks as an intermediary. However, implementation ultimately lies in the hands of the local players, such as the competent ministries, the municipalities, civil society and companies.

# INTERVIEW



Dr. Wanida Lewis,  
Director of Department  
for Programs and  
Strategic Partnerships

ENVIRONMENT360  
(GHANA)

**What are the objectives of Environment360, and where is your NGO active?**

We support and strengthen the informal waste sector and want to strategically position Environment360 as the leading organization for reducing plastic waste in Ghana. To date, we are active in Accra, Tema and Kumasi and plan to further expand regionally. Plastic waste is ultimately a problem everywhere.

**How do you support and strengthen the waste pickers with your work?**

We work together with over 500 people who collect paper, glass and plastic waste that we purchase, recycle and sell to other partners in Ghana. Our partners include Miniplast, Repatrn and Accra Brewery Limited, for example. As one of the leading organizations in this area, Environment360 ensures that the waste pickers are paid fairly for their work and have a voice, which is why we also involve them in our project design. Furthermore, we not only provide them with the necessary equipment but also teach them business management skills and how to identify high-value recycling materials and set up networks among themselves.

**What do the waste management infrastructure and plastic recycling look like in Ghana?**

Waste management, and plastic waste management in particular, is a major challenge in Ghana. Ghana produces approximately 3,000 tonnes of plastic waste every day, of which only two percent is recycled. As a result, the majority of the waste ends up in the environment, which poses major health risks in addition to an enormous environmental burden. In 2014, Ghana did not have a public waste management system or an organization that took care of the problem of plastic waste. This is why we founded Environment360.

**Apart from the informal sector, who is officially responsible for collecting plastic waste?**

The Ministry of Environment, Science, Technology and Innovation is working on action plans for fighting environmental pollution, for example. The Environmental Protection Agency as well as some regional administrations are also engaged in this topic. We also work together with the Ghanaian Educational Service (GES) to raise awareness on the topic of plastic waste in schools. However, a lot depends on personal commitment and the political priorities of the local administrations and mayors.



# “A lot depends on personal commitment”

## Who do you work together with on the local and international level?

Locally, we work with diplomatic missions, local administrations and municipalities, schools and other civil society organizations plus the private sector. In addition, we are also a member of the Ghana National Plastic Action Partnership, which was founded in 2019 and lobbies for support for the informal sector and the development of a strategic waste management system. On an international level, we work with the Norwegian and US embassies, the United Kingdom and GIZ. The latter is one of our biggest cooperation partners. With them, we are working on developing collection systems and accelerating the payment process for our waste pickers, for example. Through us, GIZ learns more about the players in the area of plastic waste management and brings together various initiatives at conferences. This type of cooperation is advantageous for both sides as GIZ gains access on the local level and we are networked on the global level.

## Where do you see the biggest challenges for cooperation projects?

The constantly changing environment involving numerous individual initiatives influences partnerships. One wants to ensure that the mutual expectations are fulfilled and that everyone can reap the fruit of their labor in the cooperation equally. This applies in particular to partnerships with the private sector, in which the focus of the cooperation is often on the economic profit – regardless of the CSR departments. To be a sustainable organization, one has to be innovative and capable of constantly tapping new streams of funding. This requires a lot of patience – but we at Environment360 have accepted the challenge of changing the mindset of people and increasing awareness for the problem of plastic waste in Ghana.

# LOCAL RESPONSIBILITIES

Even though international organizations and other global players have added the topic of waste disposal to their agendas, responsibility for the implementation of internationally agreed-on measures rests with the individual nation states and their individual states, districts and municipalities. To date, approximately two thirds of all countries have introduced laws and regulations for the disposal of waste, which in most countries is the responsibility of the local administration and whose implementation varies drastically in some cases. Central government is rarely involved in the provision of waste services on the local level and then usually only in the context of oversight and tax transfer. Approximately 70% of waste services are directly supervised by local public sector entities.<sup>83</sup> The vacuum that arises in many places due to inadequate waste management or a complete lack of it and insufficiently exercised responsibility on the part of the municipalities is sometimes filled by civil society organizations that set themselves the task of reducing the burden on the local environment and population. However, in view of lim-

ited resources and powers this can only be successful to a certain extent. Inflated expectations regarding the degree to which NGOs can solve the plastic problem for the municipalities and communities lead to disappointment in many places. It is worth noting though that a lack of waste infrastructure or insufficient funding is a challenge not only for NGOs, but also for the local private sector and public sector entities. A universal problem in economically underdeveloped countries is also the lack of expertise in the area of waste management and a lack of awareness on the part of the population, local industry and local politicians.

Fluctuating political priorities on the national as well as local level can therefore have an immense impact on the start or discontinuation of programs for improving waste management systems. This inconsistency harms the often delicate waste ecological systems born of necessity between the informal sector, NGOs and other local players.

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83 Kaza et al. (2018)



# THE NEED FOR GLOCAL SOLUTIONS

The task of the **global** level is to direct the attention and awareness of government, business and civil society players to the topics of waste, plastic and the circular economy. In the context of campaigns and voluntary measures, international agreements and conventions can act as inspiration and orientation for national action. However, they are not legally binding and are therefore part of a final solution at best. According to jointly developed guidelines, the objectives for improving the sustainability of waste management on a global level are in particular: Ensuring access for all to appropriate, safe and affordable waste disposal; stopping uncontrolled dumping and open burning; achieving sustainable and environmentally compatible disposal of all particularly hazardous waste by 2030.<sup>84</sup>

The objectives and possibilities on the **local** level vary significantly. The reason for this is the different requirements of the municipalities and the conditions in the communities. Their viewpoints must be incorporated in the global debate, not ignored. In particular, the groups hitherto underrepresented on the global stage such as waste pickers know the local conditions and prevailing structures better than everyone else. These findings are of great value for integrating the informal sector into a functioning waste management system.

Not being open to the viewpoints and arguments of the local players when setting up a sustainable waste management system would mean ignoring reality and how things are on an everyday basis in entire communities.

Furthermore, the local approaches that work must be scaled and further developed. However, if local players are to continue their work in a productive manner, international players must guarantee their commitment on a long-term basis and undertake to provide enduring support.

As shown in previous chapters and interviews, the gap between the global and local levels is still large and their players only come into contact with the reality of the stakeholders of the other level to a limited extent. This leads to inconsistencies that stand in the way of establishing a circular economy.

Waste management and resource management are currently lacking a holistic approach that covers the entire chain from product design, extraction of raw materials, production, consumption and recycling to waste management. The somewhat isolated efforts being undertaken in various different systems at the moment to put in place waste management, waste reduction and resource management are insufficient from a long-term perspective.<sup>85</sup>

A multi-stakeholder approach must be implemented that fulfills the environmental and social dimensions of the plastic problem on all levels – globally as well as locally. Otherwise, the potential offered by both approaches cannot be fully exploited.



## FIVE PAST TWELVE

### We need to scale more quickly – A conclusion

The time for experiments is running out. If we do not succeed in establishing systematic and reliable waste management in the Global South soon, many other efforts to reduce the entry of plastic waste into the environment will be fighting a losing battle. This has been clearly demonstrated by the intensive analysis of the situation, particularly in the emerging countries of Southeast Asia.

Poorer countries produce much less plastic waste per capita of its population than the industrial countries, but they emit much more. A change in consumer behavior should be aimed for everywhere – in the Global South and the Global North. However, it will not solve the problem as long as the infrastructure for collecting plastic waste safely is missing. Without this infrastructure, there is no circular economy.

There is even a risk that the problem will become much worse in the future. The situation is similar to that with CO<sub>2</sub> emissions: As industrialization increases and prosperity grows, the consumption of resources by a society increases as well. If the disposal and recycling infra-

structure in the Global South does not develop significantly quicker than the consumption, the problem increases tenfold.

This finding, on which all the experts interviewed for this report agree, should not detract from the efforts in all the other fields of action. Consumer information, innovations in material and product design, the search for alternatives to plastic packaging, initiatives for cleaning up coasts, rivers and oceans – all of this is and remains vital. The alarming prospect of more plastic than fish in the oceans by 2050 can, however, only be prevented by globally established waste management.



## WHAT NEEDS TO BE DONE?

This stocktaking shows that there is neither a lack of will on the part of the relevant players nor a lack of functioning models. What is missing is systematic, focused scaling and dissemination of good practice.

In contrast to the opinion widely held in the industrialized west, most governments in the affected countries are aware of the situation and are willing to act. The research for this report has shown this as well. Many countries have already formulated ambitious targets and passed corresponding laws. Further proselytizing is not just unnecessary but probably even counterproductive.

Key companies that themselves put plastic packaging on the market are definitely interested in exercising extended producer responsibility in the Global South as well. Solutions and methods as to how a functioning and affordable infrastructure can be developed on the municipal level and with the involvement of all relevant players also exist.

It is high time to pool the resources more effectively than in the past and to invest heavily in the scaling of successful solutions. The established logic of project-related action must be overcome.

The research for this POLYPROBLEM report has shown that global programs by public institutions, cross-sector networks and initiatives from business support many local developments but rarely the systematic transfer.

In addition, the enormous investments required can naturally only be made if financial resources from public institutions, international funding structures such as the World Bank and business are combined.

“The Waste of Others” – this is the name we deliberately and provocatively gave to this POLYPROBLEM report. Without a doubt, it is up to each and every one of us to shoulder the responsibility. For this reason, joint action is needed.

# POLY PROBLEM

## POLYPROBLEM: Knowledge. Transparency. Cooperation

POLYPROBLEM is a joint initiative of the non-profit Röchling Foundation and the consultancy firm Wider Sense. In 2019, the initiators published a study with the same title that came to the sobering conclusion that a global agenda is still not in sight despite active public interest in the ongoing environmental pollution caused by plastic waste. In addition, there are only a few sources that provide information on this topic in a continuous, comprehensive and scientifically sound manner.

In cooperation with companies, foundations, NGOs, science and politics, this gap is to be closed under the aegis of POLYPROBLEM and the best innovations for achieving an environment free of plastic waste supported.

Together with experts from science and practice, POLYPROBLEM publishes reports on the latest developments and the most urgent questions concerning the topic of plastics and the environment twice a year. The aim is to provide greater clarity, transparency and orientation in complex fields of action but also to reveal amazing facts or explore previously overlooked aspects.

[www.polyproblem.org](http://www.polyproblem.org)



The Röchling Foundation is dedicated to the topic of plastics and the environment. It supports both research projects and civil society initiatives that contribute to the responsible use of plastics as part of a sustainable circular economy. The Röchling Foundation does not regard itself purely as a sponsor in this process – its primary motivation is creating new cooperations and networks that span a wide range of sectors. As is the case with this topic report, the Foundation also initiates its own activities in order to help to create a holistic understanding of and integrated solutions for the global challenge that is plastics and the environment.

The Röchling Foundation was established by the entrepreneurial Röchling family in 1990. The family also owns the Röchling Group, one of the world's leading suppliers of high-performance plastics for automotive engineering, industrial applications and medical technology.

[www.roechling-stiftung.de/en/](http://www.roechling-stiftung.de/en/)

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WIDER SENSE advises foundations, companies and the public sector on corporate social responsibility (CSR), philanthropy and social investments. We support the development and implementation of innovative and effective programs with strategic consultancy and mentoring. Together with our clients, we shape social change in key topics such as social justice, education, democracy, human rights and sustainability. With an international reach and a multidisciplinary team, WIDER SENSE has collaborated with over 100 clients on projects in over 30 countries and directly influenced social change funds amounting to over 100 million euros. WIDER SENSE has been a Certified B Corporation since May 2015.

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# LINKS TO THE ORGANIZATIONS MENTIONED

Organization	Abbr.	Link
Alliance to End Plastic Waste	AEPW	<a href="https://endplasticwaste.org/">https://endplasticwaste.org/</a>
Arbeitsgemeinschaft Verpackung + Umwelt e. V.	AGVU	<a href="https://www.agvu.de/de/">https://www.agvu.de/de/</a>
Association of Southeast Asian Nations	ASEAN	<a href="https://asean.org/asean-framework-action-marine-debris/">https://asean.org/asean-framework-action-marine-debris/</a>
Borealis AG		<a href="https://www.youtube.com/user/borealistv">https://www.youtube.com/user/borealistv</a>
#breakfreefromplastic		<a href="https://www.breakfreefromplastic.org/">https://www.breakfreefromplastic.org/</a>
Federal Ministry for Economic Cooperation and Development	BMZ	<a href="http://www.bmz.de/de/themen/abfall/index.html">http://www.bmz.de/de/themen/abfall/index.html</a>
Bundesverband der Deutschen Entsorgungs-, Wasser- und Rohstoffwirtschaft	BDE	<a href="https://www.bde.de/">https://www.bde.de/</a>
cyclos future GmbH		<a href="https://cyclos-future.de/">https://cyclos-future.de/</a>
Der Grüne Punkt – Duales System Deutschland GmbH		<a href="https://www.gruener-punkt.de/">https://www.gruener-punkt.de/</a>
Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH	GIZ	<a href="https://www.giz.de/">https://www.giz.de/</a>
Ellen MacArthur Foundation		<a href="https://www.ellenmacarthurfoundation.org/">https://www.ellenmacarthurfoundation.org/</a>
Environment360		<a href="https://www.environment360gh.org/">https://www.environment360gh.org/</a>
Environmental Protection Agency	EPA	<a href="https://www.epa.gov/">https://www.epa.gov/</a>
European Plastics Pact		<a href="https://europeanplasticspact.org/">https://europeanplasticspact.org/</a>
European Commission		<a href="https://ec.europa.eu/docsroom/documents/36361">https://ec.europa.eu/docsroom/documents/36361</a>
Europäischer Wirtschaftsdienst GmbH	EUWID	<a href="https://www.euwid.de/fachmedien/recycling-und-entsorgung/">https://www.euwid.de/fachmedien/recycling-und-entsorgung/</a>
GA Circular		<a href="https://www.gacircular.com/">https://www.gacircular.com/</a>
Global Alliance for Incinerator Alternatives	GAIA	<a href="https://www.no-burn.org/">https://www.no-burn.org/</a>
Global Alliance of Waste Pickers		<a href="https://globalrec.org/">https://globalrec.org/</a>
Global Environment Facility	GEF	<a href="https://www.thegef.org/">https://www.thegef.org/</a>
Global Plastic Action Partnership	GPAP	<a href="https://www.weforum.org/gpap">https://www.weforum.org/gpap</a>
GreenCycle Umweltmanagement GmbH		<a href="https://www.greencycle.de/">https://www.greencycle.de/</a>
Greenpeace		<a href="https://www.greenpeace.org/malaysia/press/1966/greenpeace-statement-on-the-asean-framework-of-action-on-marine-debris/">https://www.greenpeace.org/malaysia/press/1966/greenpeace-statement-on-the-asean-framework-of-action-on-marine-debris/</a>
Indonesian Waste Platform	IWP	<a href="http://www.indonesianwaste.org/en/home/">http://www.indonesianwaste.org/en/home/</a>
International Resource Panel		<a href="https://www.resourcepanel.org/">https://www.resourcepanel.org/</a>
International Solid Waste Association	ISWA	<a href="https://www.iswa.org/">https://www.iswa.org/</a>
Naturschutzbund Deutschland e.V.	NABU	<a href="https://www.nabu.de/">https://www.nabu.de/</a>
New Plastics Economy		<a href="https://www.newplasticseconomy.org/">https://www.newplasticseconomy.org/</a>
New Urban Agenda	NUA	<a href="http://habitat3.org/wp-content/uploads/NUA-English.pdf">http://habitat3.org/wp-content/uploads/NUA-English.pdf</a>
Organization for Economic Co-operation and Development	OECD	<a href="https://www.oecd.org/environment/waste/policy-highlights-extended-producer-responsibility-and-the-impact-of-online-sales.pdf">https://www.oecd.org/environment/waste/policy-highlights-extended-producer-responsibility-and-the-impact-of-online-sales.pdf</a>
One Earth – One Ocean e.V.	OEOO	<a href="https://oneearth-oneocean.com/">https://oneearth-oneocean.com/</a>
Packaging and Recycling Association for Indonesia Sustainable Environment	PRAISE	<a href="https://praiseindonesia.com/">https://praiseindonesia.com/</a>
Plastic Bank		<a href="http://www.plasticbank.org">www.plasticbank.org</a>
Platform for Accelerating the Circular Economy	PACE	<a href="https://pacecircular.org/">https://pacecircular.org/</a>
PREVENT Waste Alliance	PREVENT	<a href="https://prevent-waste.net">https://prevent-waste.net</a>
PreZero		<a href="https://prezero.com/">https://prezero.com/</a>
Project STOP		<a href="https://www.stopoceanplastics.com/">https://www.stopoceanplastics.com/</a>
Recycling Netwerk Benelux		<a href="https://recyclingnetwerk.org/">https://recyclingnetwerk.org/</a>
REset PLASTIC		<a href="https://reset-plastic.com/de/">https://reset-plastic.com/de/</a>
SOCEO gGmbH		<a href="https://soceo.de/">https://soceo.de/</a>
SWaCH (Pune, India)	SWaCH	<a href="https://swachcoop.com/">https://swachcoop.com/</a>
The Plastics Pact	WRAP	<a href="http://www.wrap.org.uk/">http://www.wrap.org.uk/</a>



Organization	Abbr.	Link
The World Bank		<a href="https://www.worldbank.org/">https://www.worldbank.org/</a>
United Nations Development Programme	UNDP	<a href="http://www.undp.org/content/undp/en/home/sustainable-development-goals.html">http://www.undp.org/content/undp/en/home/sustainable-development-goals.html</a>
United Nations Environment Programme	UNEP	<a href="https://www.unenvironment.org/">https://www.unenvironment.org/</a>
Women in Informal Employment Globalizing and Organization	WIEGO	<a href="https://www.wiego.org/">https://www.wiego.org/</a>
World Business Council for Sustainable Development		<a href="http://docs.wbcsd.org/2016/11/wbcsd_informalapproaches.pdf">http://docs.wbcsd.org/2016/11/wbcsd_informalapproaches.pdf</a>
World Economic Forum		<a href="https://www.weforum.org/agenda/archive/plastics/">https://www.weforum.org/agenda/archive/plastics/</a>
Wuppertal Institute		<a href="https://wupperinst.org/das-institut/">https://wupperinst.org/das-institut/</a>
WWF Deutschland	WWF	<a href="https://mobil.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/WWF-Faktenblatt-Plastikmuell.pdf">https://mobil.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/WWF-Faktenblatt-Plastikmuell.pdf</a>

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### **Additional interviews were carried out with the following people:**

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**Cyclos GmbH**, Agnes Bünemann  
Managing Director

**Der Grüne Punkt - Duales System Deutschland GmbH**, Helmut Schmitz  
Director of Communication and Public Affairs

**Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH**, Dr. Johannes Paul  
Advisor in the Department for Climate, Environment and Infrastructure

**Environment360**, Dr. Wanida Lewis  
Director of Department for Programs and Strategy Environment360, Ghana

**Naturschutzbund Deutschland e.V. (NABU)**, Sascha Roth  
Environmental Policy Officer

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**Waste Picker from Kalibazar** on Sagar Island in West Bengal (India), Habibul Mondol

