

# Leaving no one behind

---

How a global instrument to end plastic pollution can enable a just transition for the people informally collecting and recovering waste





Funding provided by :



Norwegian Ministry  
of Climate and Environment

Leaving no one behind

How a global instrument to end plastic pollution can enable a just transition for the people informally collecting and recovering waste

Copyright © United Nations Human Settlements Programme (UN-HABITAT) and Norwegian Institute for Water Research (NIVA) 2022

All rights reserved

United Nations Human Settlements Programme (UN-Habitat)  
P.O. Box 30030 00100 Nairobi KENYA  
[www.unhabitat.org](http://www.unhabitat.org)

Norwegian Institute for Water Research (NIVA)  
Økernveien 94, 0579 Oslo NORWAY  
[www.niva.no](http://www.niva.no)

#### DISCLAIMER

The designations employed and the presentation of the material in this report do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area, or of its authorities, or concerning delimitation of its frontiers or boundaries, or regarding its economic system or degree of development. The analysis, conclusions and recommendations of this report do not necessarily reflect the views of the United Nations Human Settlements Programme or its Executive Board.

Cover photo NEW DELHI, INDIA - June 04, 2020 [ Exposure Visuals / Shutterstock.com ]

# Contents

<b>Contents</b>	iii
<b>Glossary</b>	iv
<b>List of abbreviations and acronyms</b>	vii
<b>List of Tables</b>	viii
<b>List of Figures</b>	viii
<b>Acknowledgements</b>	ix
<b>Foreword</b>	x
<b>Preface</b>	xi
<b>Message</b>	xii
<b>Executive Summary</b>	xiii
<b>1. Background</b>	1
About the report	4
<b>2. Plastic pollution, the IWRS and striving to achieve sustainable development</b>	7
2.1 Overview of the IWRS	11
2.2 Contribution to sustainable cities and circular waste management solutions	14
2.3 Challenges faced by the IWRS	17
<b>3. Elements to consider for a just transition of the IWRS in the context of a global instrument.</b>	23
3.1 Relevant concepts	24
3.2 Drawing on experiences from other MEAs	33
3.3 Recognition and inclusion of the IWRS	37
3.4 Further key considerations	44
<b>4. Conclusions</b>	51
4.1 Possibilities for inclusive and just negotiations to end plastic pollution	52
4.2 Possibilities for addressing the informal waste and recovery sector in a global instrument	53
4.3 Possibilities for implementing a global instrument at national and local level	55
<b>References</b>	57

# Glossary

The use of terminology differs between stakeholders and across contexts. A common understanding of key terminology is an important basis for discussion and to avoid miscommunication, especially when negotiating a global instrument to end plastic pollution. The terminologies below are relevant for the on-going intergovernmental negotiations and related discourse. The following definitions were developed based on existing Multilateral Environmental Agreements and definitions used by organisations including the ILO, WIEGO and UN-Habitat. They have been aligned with and adapted to the ongoing discourse surrounding just transitions, inclusion of workers in informal and cooperative settings, and preparatory documents for the first intergovernmental negotiation committee (INC) meeting. The terminology should be understood in the context of this report.

## **Environmentally sound waste management**

Taking all practicable steps to ensure that waste is managed in a manner which will protect human health and the environment against the adverse effects which may result from managing the waste.

## **Formalisation of the IWRS**

Changes in the legal policy landscape to recognise and integrate the IWRS in law and in practice, and the process of extending legislative frameworks to cover labour and social protection for informal sector workers.

## **Inclusion of the IWRS**

Conscious inclusion of voices, interests and knowledge of IWRS stakeholders as a key element of decision-making processes and the development of policies that reduce pollution on local to global scales.

## **Informal economy**

All economic activities by workers and economic units that are in law or in practice, not covered or insufficiently covered by formal arrangements, and does not cover illicit activities.

## **Informal waste and recovery sector**

sector of the informal economy where workers and economic units are involved in solid waste collection and recovery activities which are – in law or in practice – not covered or insufficiently covered by formal arrangements.

## **Integration of the IWRS**

Integration of IWRS actors as active stakeholders in municipal solid waste management systems, which can take different forms.

## **Just transition of the IWRS**

Designing and promoting the transition to sustainable production and consumption (of plastic) in a manner that is as fair, inclusive and equitable as possible to the IWRS, generating and preserving decent work opportunities and leaving no one behind.

## **Municipal solid waste**

Includes waste generated from households, commerce and trade, small businesses, office buildings and institutions (schools, hospitals, government buildings). It also includes bulky waste (e.g., white goods, old furniture, mattresses) and waste from selected municipal services (e.g., waste from park and garden maintenance, waste from street cleaning services such as street sweeping, content of litter containers and market cleansing waste), if managed as waste. The definition excludes waste from municipal sewage network and treatment, municipal construction and demolition waste.

## **Recyclables**

Waste materials that can be reused or recycled.

## **Recycling**

Processing of waste materials for the original purpose or for other purposes, excluding energy recovery.

## **Reuse**

Use of a product more than once in its original form, possibly after some slight modification, cleaning or repair.

## **Source separation**

Sorting of recyclable materials at the point of generation. It is also known as source segregation.

## **Plastic recovery value chain**

Involves several steps of the recovery industry that purchases, processes and trades plastics, from the point plastic is extracted from the waste generators until it is reprocessed into materials, products or substances that have market value. In many countries, this involves several trade relationships in which value is typically added at each step, through segregation and processing of plastic waste, involving waste pickers/collectors, intermediate traders, apex traders and end-of-chain recyclers.

### **Waste pickers<sup>1</sup>**

Individuals/workers who pick items and materials from public spaces, open dumpsites or landfills, and/or waste bags and bins on streets, and sell recyclables to intermediate or apex traders.

### **Informal waste collectors**

Individuals/workers who collect mixed, or source segregated solid waste from waste generators, mostly for a fee, and either drop it at formal or informal collection points or sell recyclables to intermediate or apex traders. These include individuals/workers often referred to as itinerant buyers, who buy or barter recyclables from waste generators.

### **Intermediate traders**

Individuals/workers or economic units that receive materials from both formal and informal recyclable collection systems (including waste pickers and informal waste collectors), and store and prepare these materials for onward trading to apex traders.

### **Apex traders**

Economic units that receive materials from intermediate traders or directly from both formal and informal recyclable collection systems (including waste pickers and informal waste collectors), and store and prepare these materials for onward trading to end-of-chain recyclers.

### **End of chain recyclers**

Economic units that receive materials from apex traders or directly from both formal or informal municipal solid waste collection systems and process them into materials and products that have value in the economy through recycling.

# List of abbreviations and acronyms

<b>ASGM</b>	Artisanal and small-scale gold mining	<b>NGO</b>	Non-governmental organisation
<b>CBD</b>	Convention on Biological Diversity	<b>NIVA</b>	Norwegian Institute for Water Research
<b>EGM</b>	Expert Group Meeting	<b>OEWG</b>	Open-Ended Working Group
<b>EPR</b>	Extended producer responsibility	<b>PPE</b>	Personal protective equipment
<b>ESM</b>	Environmentally sound management	<b>PPP</b>	Public-private partnership
<b>FPRW</b>	Fundamental Principles and Rights at Work	<b>PRO</b>	Producer responsibility organisation
<b>GEF</b>	Global Environment Facility	<b>R204</b>	ILO's Transition from the Informal to the Formal Economy Recommendation
<b>ILO</b>	International Labour Organisation	<b>SDGs</b>	Sustainable Development Goals
<b>INC</b>	Intergovernmental Negotiation Committee	<b>SWM</b>	Solid waste management
<b>IKHAPP</b>	International Knowledge Hub Against Plastic Pollution	<b>UNEA</b>	United Nations Environment Assembly
<b>IWRS</b>	Informal waste and recovery sector	<b>UNEP</b>	United Nations Environment Programme
<b>MEA</b>	Multilateral Environmental Agreement	<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>MGoS</b>	Major groups and other stakeholders	<b>UN-Habitat</b>	United Nations Human Settlements Programme
<b>MLP</b>	Multi-layered plastic	<b>WaCT</b>	Waste Wise Cities Tool
<b>MSD</b>	Multi-stakeholder dialogue	<b>WG8j</b>	Working Group on Article 8(j) of the CBD
<b>MSWM</b>	Municipal solid waste management	<b>WIEGO</b>	Women in Informal Employment: Globalising and Organising
<b>NAP</b>	National Action Plan	<b>WPO</b>	Waste picker organisation

# List of Tables

TABLE 1	Health and safety risks faced by workers in the IWRS. . . . .	18
TABLE 2	Applying interlinked elements of justice to the scope of a global instrument on plastic pollution. . . . .	25
TABLE 3	R204 Principles and the possibilities for a just transition of the IWRS. . . . .	28
TABLE 4	Transferable concepts of participation and sustainable development for a just transition of the IWRS . . . .	30

# List of Figures

FIGURES 1	Survey responses by waste picker organisations to “What waste materials does your group recover?”. . . . .	5
FIGURES 2	Global estimate of SDG Indicator 11.6.1 by UN-Habitat. . . . .	8
FIGURES 3	Household survey results on access to basic waste collection service in Nairobi, Kenya, and Kampala, Uganda. . . . .	8
FIGURES 4	Conceptual diagram of IWRS actors in the informal plastic recovery chain, including their degree of vulnerability, as well as material specialisation and formality. . . . .	12
FIGURES 5	Survey responses to the question “Where does your group recover waste materials?”. . . . .	13
FIGURES 6	Survey responses from local governments to the question “In your view, do waste pickers benefit your city? . . . . .	16
FIGURES 7	Number of survey responses from WPOs to the question “In your view, how do waste picker activities benefit society?” . . . . .	16
FIGURES 8	Survey responses from waste picker organisations on “What challenges do waste pickers face?” . . . . .	20

# Acknowledgements

Preparation of this report was funded by the Norwegian Ministry of Climate and Environment and supported by the International Knowledge Hub Against Plastic Pollution (IKHAPP), which is funded by the Research Council of Norway.

The substantive preparation was led by UN-Habitat's waste team within the Urban Basic Services Section and experts from the Norwegian Institute for Water Research (NIVA). Principal authors/editors are Emmy Nøklebye (NIVA), Nele Kapp (UN-Habitat) and Joshua Palfreman (UN-Habitat). Eirik Hovland Steindal (NIVA), Nao Takeuchi (UN-Habitat), Andre Dzikus (UN-Habitat) and Cecilia Andersson (UN-Habitat) provided overall guidance for the report.

Authors were supported by contributors and reviewers comprised of Luca Nizzetto and Hans N. Adam (NIVA), and Martin Medina-Martinez, Voltaire Acosta, Bhen Aguihon, Eugene Nyankson and Aubine Esther Isimbi (UN-Habitat).

This publication benefited from reviews by eminent researchers and sector experts including David C. Wilson (independent resource and waste management consultant and Imperial College London), Yasuhiko Kamakura (ILO), Marianne Bailey (Secretariat of the Minamata Convention on Mercury), Sonia Mistry (Solidarity Center), Nour Abdel-Ghani (Solidarity Center), Andrés Del Castillo (CIEL), Maria Soledad Mella Vidal (International Alliance of Waste Pickers - Chile), Kaveri Gill (Shiv Nadar University) and Bashir Oyetunji (Chartered Institute of Project Managers of Nigeria).

In addition to the abovementioned reviewers, the authors would like to extend a thanks to all who contributed with valuable insights during the Expert Group Meeting, stakeholder consultations, and the Open-Ended Working Group meeting in Dakar, including Adja Mame Seyni Diop (Bokk Diom), Amira El Halabi (WIEGO), Anne Scheinberg (Springloop Cooperatie U.A), Antonio Q'Apaj Conde Choque (Secretariat of the Convention on Biological Diversity), Carlos Martin-Novella (Basel, Rotterdam and Stockholm Conventions), David Azoulay (CIEL), David Marquis (UNEP), Federico Parra (WIEGO), Harouna Niass (Bokk Diom), Ibrahima Mbaye (Bokk Diom), Jeroen Ijgosse (WASTE Netherlands), Joachim Stretz (WasteAware), John Chewa (KeNaWPWA), Johnson Doe (International Alliance of Waste Pickers), Kabir Arora (International Alliance of Waste Pickers), Lubna Anantkrishnan (SWaCH), Ludovic Bernaudat (UNEP), Mari Williams (Tearfund), Nalini Shekar (Hasiru Dala), Neil Tangri (GAIA), Sarika Nair (Hasiru Dala), Siddharth Hande (Kabadiwalla Connect), Sonia M. Dias (WIEGO), Taylor Cass Talbott (WIEGO), and Uttam Kumar Saha (Practical Action)

Finally, the authors would like to thank Ayano Fukuoka for the report layout and Leah Witton, The English Editors, for editing the report.

# Foreword

Globally, municipal solid waste generation will double by 2050. Still, already today, as many as 2 billion people lack access to any waste collection service. 3 billion people openly dump waste. This means that every day, more than 1 million tonnes of waste impact our health and environment, including our oceans. Inadequate municipal solid waste management is one of the largest contributors to plastic pollution, both on land and in water.

This is an immense challenge, but we can overcome it. We need to harness existing solutions and engage with the millions of people who collect, sort and process waste – the workers in the informal waste and recovery sector (IWRS), such as waste pickers, collectors and traders. They currently help to recycle almost 60% of plastic waste worldwide and sometimes provide the only form of municipal solid waste services. Their work not only surfaces reusable materials but also positively contributes to public health, creates cleaner cities, and saves local government resources.

Therefore, the contribution of the IWRS to sustainable cities needs to be recognised. While the New Urban Agenda notes the critical role of the informal economy and commits to supporting it, the resolution to end plastic pollution, passed at the United Nations Environment Assembly in March 2022, for the first time recognises explicitly the contribution of the IWRS. Therefore, the on-going discussions on an internationally binding instrument on plastic pollution provide a unique opportunity to improve the workers' livelihoods in the IWRS.

Confronted with growing mountains of solid waste in general, and plastic waste in particular, cities worldwide are eager to find solutions. Many have already recognised the value of integrating the knowledge and skills of the IWRS into formal municipal solid waste management systems. When I was Mayor of Penang in Malaysia, we provided waste pickers with photo identity cards to register them and gain access to benefits such as health care. Together – citizens, formal and informal stakeholders – we increased the recycling rate during my term from 15% to 56%.

Now at UN-Habitat, I support cities in improving their municipal solid waste management systems through the Waste Wise Cities programme and the African Clean Cities Platform. We promote the gathering of baseline data through the Waste Wise Cities Tool. A valid assessment and evidence-based interventions are only possible by engaging with all stakeholders active in waste management in the city, including the IWRS.

I hope that this report will inspire decision-makers in local and national governments to work together with the people collecting and recovering solid waste informally. This can help improve municipal solid waste management, recover city resources to end plastic pollution and improve the quality of life for urban residents, while leaving no one and no place behind.



A stylized, handwritten signature in black ink, appearing to read 'Maimunah'.

**Maimunah Mohd Sharif**

Under-Secretary-General and Executive Director  
United Nations Human Settlements Programme (UN-Habitat)

# Preface

Plastic pollution is one of the great sustainability challenges of the 21st century with implications for climate change, biodiversity, livelihoods, and human health. There is broad consensus that the impacts from plastic pollution in the face of inaction are highly problematic, with potentially adverse long-term consequences.

To achieve the 2030 Agenda for Sustainable Development, the needs and voices of those who are disproportionately affected by plastic pollution around the world must be prioritised, in tune with environmental regulations and policy. This is an essential element of leaving no one behind in a just and sustainable transition towards ending plastic pollution. A just transition is key to protect and enhance livelihood security for people working in the informal waste and recovery sector (IWRS). The sector has relevant expertise and knowledge on plastic waste management which can provide valuable input to international policy developments on plastic pollution.

UNEA 5.2 concluded with a resolution to develop a legally binding instrument to end plastic pollution and the establishment of a science-policy panel to contribute to further the sound management of chemicals and waste. In a rapidly developing world, relevant and high-quality research should be at the forefront of decision-making.

For over 60 years, the Norwegian Institute for Water Research (NIVA) has engaged in societally relevant research that provides the knowledge base needed to solve environmental challenges related to marine and freshwaters. Building on our experiences working at the science-policy interphase related to the Basel, Stockholm, and Minamata Conventions, we believe that a sustainable and resilient plastic treaty could consider lessons learned from the development and implementation of other multilateral environmental agreements.

Significant knowledge gaps with regards to the scale, recycling capacities, and socio-economic dimensions in the IWRS remain. These blind spots impede the development of targeted pollution reduction measures that build on existing informal structures while promoting human and workers' rights. Scientific institutions can play a key role in bridging these knowledge gaps through scientifically sound, ethical, and transparent research and data collection methodologies. It is key to recognize and actively involve stakeholders from the IWRS to generate high-quality research that is relevant and accessible, and to ensure that goals of reduced pollution do not conflict with broader sustainable development goals.

Collaboration and partnerships across research environments, engaging with public actors, private sector, and civil society is key to develop solutions that work. We are delighted to have co-produced this important knowledge base in collaboration with the UN-Habitat team, which provides a starting point for developing solutions to end plastic pollution while promoting a just transition of the IWRS. The preparation of this report would not have been possible without the contributions from many highly committed people from civil society organisations around the world, including representatives from the International Alliance of Waste Pickers.



**Thorjorn Larssen**  
Deputy Managing Director, Norwegian Institute for  
Water Research (NIVA)



# Message

The 'Leaving No-one Behind' report is a welcome addition to our understanding of the work of waste-pickers and the wider informal waste and recycling sector. It provides detailed definitions of various actors, descriptions of processes, and stages of value addition in plastic waste recovery and recycling. The report fills a gap in the existing understanding of the sector and highlights the role and scale of the participation of various actors. Importantly, it points out degrees of informality existing in the value chain. Therefore, it warns against one size fit all approaches or blanket 'formalization.' Interventions and plans of engagement need to deal with the specificities of various actors in the value chain and with distinct geographies of recovery and recycling. The report also outlines the roadmap for future possibilities of integration, involvement, and partnership with waste-pickers and the wider informal waste recycling sector, with a special emphasis on strengthening social protection. The report is a valuable document for policymakers negotiating the international legal instrument to deal with plastic pollution. Similarly, it provides useful insights for practitioners in plastic waste management, trade unions, and associations of waste-pickers and other workers in the informal waste and recycling sector.

There are two aspects, which I found interesting in the report. It is one of the few documents, which points out that waste-pickers and the informality in the recycling value chain are not limited to countries in the 'Global South.' The report provides evidence that informality in waste recycling exists in countries based in both the northern and southern hemispheres. The other important aspect to note is the emphasis on waste-pickers' autonomy to define the integration process. Many times, waste-pickers' integration models have been suggested by well-meaning organizations and individuals with good intentions, who may have

overlooked subjectivities, aspirations, and perceptions of waste-pickers when providing a blueprint for the integration process. There will always be waste-pickers who would prefer to continue with their existing work and not seek change in their livelihood. Any integration measure needs to take that desire of continuation into consideration. In such scenarios where waste-pickers continue with their existing practice, improvement in the working environment, fair remuneration, and social protection become central to their participation in the recovery and recycling process.

To conclude, the report is an important additional step towards the recognition of waste-pickers since the United Nations Environment Assembly 5.2 (UNEA) in Nairobi, Kenya. Previously, only the UNEA 5.2 resolution acknowledged the work of waste-pickers and other workers engaged in recycling in informal and cooperative settings. We hope that the insights of the report feed into future discussions on ways to deal with growing plastic pollution. I close my statement by repeating the slogans of waste-pickers' movements across the world:

**'Recycling without waste-pickers is garbage,'**

**and 'No Plastics Treaty without waste-pickers.'**

**Kabir Arora (Qabeer Jalandhari)**

International Alliance of Waste-pickers  
(Previously known as the Global Alliance of  
Waste-pickers)



# Executive Summary

An estimated 60 million tonnes of plastic per year from the municipal solid waste stream pollute the environment including water bodies, due to lack of collection services and mismanagement of solid waste<sup>2</sup>. This number would be even higher without the informal waste and recovery sector (IWRs), which significantly contributes to improving solid waste management by collecting, segregating, processing and recycling plastic and other discarded materials globally. However, strategies to reduce this kind of plastic pollution often fail to adequately engage with the recovery capacities, skills and knowledge of the IWRs. This exacerbates livelihood vulnerabilities and damages existing informal recovery systems. This report argues that utilising and enhancing existing skills, networks and recovery capacities in the IWRs is urgently needed to reduce plastic pollution. It also calls for measures to ensure a just transition of the IWRs across local, national and global levels, especially in consideration of the on-going negotiations towards an international legally binding instrument to end plastic pollution.

A just transition of the IWRs means that the transition to sustainable production and consumption of plastic is designed in a manner that is as fair, inclusive and equitable as possible to the IWRs, generating and preserving decent work opportunities, and leaving no one behind. Solutions can only be sustainable if those who are affected are able to contribute to the decision-making process with thoughts, knowledge and expectations.

This report is informed by a virtual Expert Group Meeting, the Open-Ended Working Group meeting to prepare for the Intergovernmental Negotiating Committee (INC) meetings, a survey of key stakeholders, direct expert consultations, and a literature review, all conducted in 2022. The findings were discussed in virtual stakeholder consultations. The report presents the prevailing debates on a just transition of the IWRs and elaborates on possibilities to support the inclusion of the IWRs in the process to end plastic pollution. It is hoped that taking these considerations into account will contribute to the development of increasingly just and sustainable waste management systems locally and globally.

The report also discusses how engaging with the IWRs has the potential to achieve the broader Sustainable Development Goals of reducing poverty and inequality.

The negotiations towards a global instrument to end plastic pollution offer an opportunity to facilitate a just transition of the IWRs. A just transition demands the active and meaningful participation of IWRs stakeholders throughout the negotiation process and during the implementation of the instrument, since the outcomes will directly affect IWRs livelihoods, either intentionally or unintentionally. Active and meaningful participation in the negotiation process implies:

1. ensuring stakeholders have access to information about the possibility to make written and oral statements related to relevant items on the agenda during the negotiations,
2. drawing on instruments for enhanced public participation, such as the Aarhus Convention and the Escazú agreement,
3. facilitating spaces for multi-stakeholder dialogues (MSDs), and
4. enabling a strong interaction between such fora and the INC,

by developing a procedure for the inclusion of key concerns raised by stakeholders during the MSD into the INC. Furthermore, the IWRs should be regarded as a knowledge provider for innovation and practices that can feed into policy processes.

Recognition and inclusion of the voices and the role of the IWRs in the development of solutions to end pollution is key to ensuring that such outcomes align with the targets of Sustainable Development Goal 8 of labour rights, safe and secure working environments, productive employment, decent work and equal pay for work of equal value. Furthermore, these solutions need to build on principles of environmental justice, recognising that environmental degradation and poverty are interlinked threats to sustainable development. Therefore, the needs of those who are disproportionately affected by pollution around the world must be prioritised. This is an essential element of leaving

no one behind in a just and sustainable transition towards ending plastic pollution. Key efforts are needed to facilitate participation and representation of stakeholders across the plastic life cycle, including IWRS workers, in decisions that directly affect their livelihoods. These include providing financial support and venues that allow for active engagement across languages and cultures, as well as the provision of technical and legal assistance, and translation and interpretation wherever necessary.

This report also identifies experiences and lessons learned from existing Multilateral Environmental Agreements, with regard to informality, environmentally sound waste management and inclusion of indigenous knowledge, in order to identify mechanisms that could facilitate a just transition of the IWRS. Possibilities to address the IWRS in a forthcoming global instrument to end plastic pollution include:

1. specifically addressing the IWRS in a dedicated provision or article,
2. considering the development of National Action Plans (NAPs) by all Parties that particularly address the IWRS,
3. establishing a working group dedicated to a just transition of the IWRS,
4. delineating worst practices and building capacity towards environmentally and socially sound management of waste, rather than banning or undermining IWRS activities,
5. providing Parties from developing countries and economies in transition with support in implementing their obligations, including capacity building and financial resources to conduct baseline assessments and develop and implement NAPs, and
6. including a glossary of key terms and concepts relevant to the just transition of the IWRS, developed with IWRS actors.

Another element that needs to be considered for a just transition of the IWRS is its integration into formal waste management systems. Integration has commonly been practiced through formalisation of IWRS stakeholders, IWRS workers organising in cooperatives and associations, or IWRS workers being employed in formal (municipal or private) waste management systems. However, approaches are often combined and interlinked,

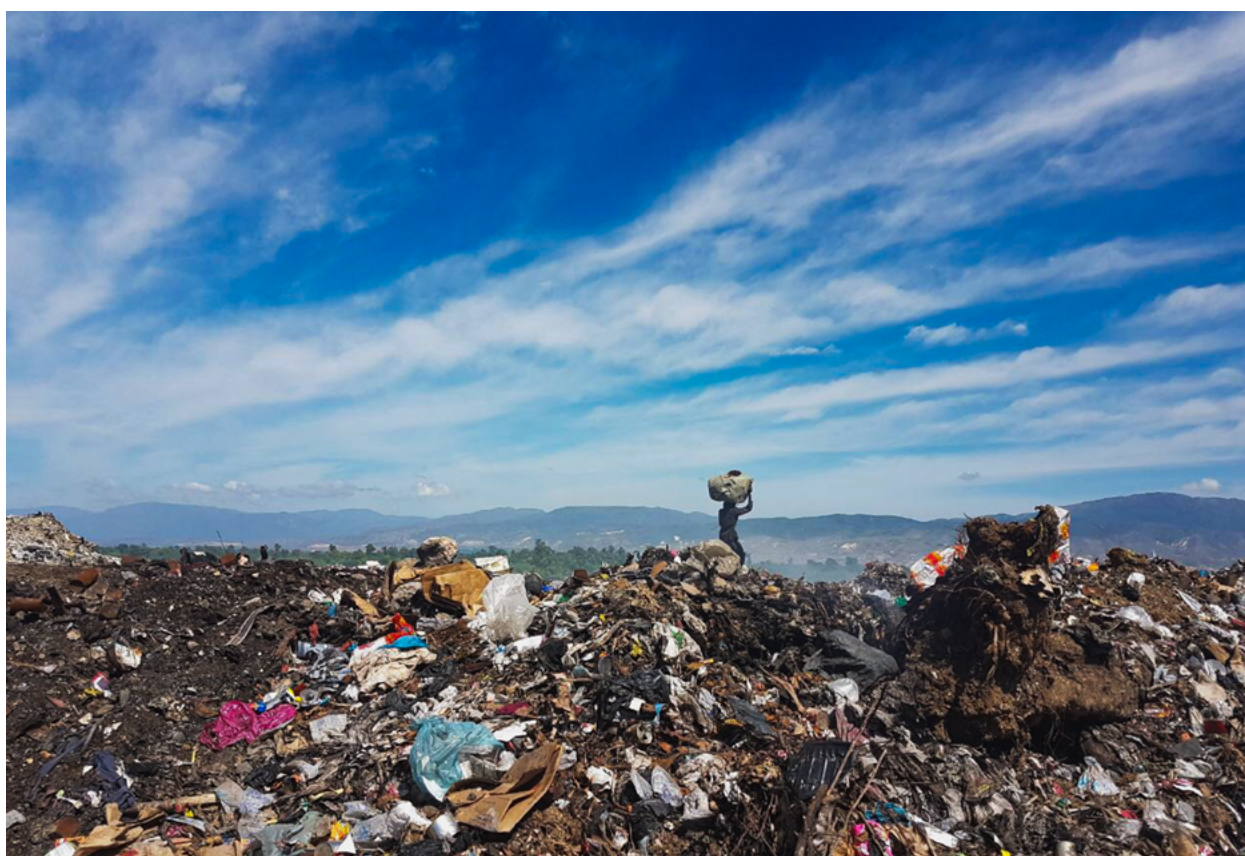
and their socio-economic outcomes may differ across contexts. It must be noted that there is no one-size-fits-all solution to a just transition, as circumstances and people involved in the process differ. Top-down integration and formalisation processes that do not reflect the voices and interests of the IWRS may give rise to adverse socio-economic impacts. They also often fail to recognise the potential of existing skills, established network structures and trade relationships in the IWRS. It must also be noted that some stakeholders may wish to remain in the informal sector, due to advantages it offers them such as autonomy and flexibility.

Specific integration actions include recognising and addressing the IWRS in national and local policies aimed at improving waste management and reducing plastic pollution, and providing capacity building activities and skills development for the IWRS to enable the formation of IWRS worker organisations and unions. This can include the promotion of environmentally and socially sound waste management practices and enabling IWRS workers to upskill or shift to alternative livelihoods, depending on the individuals' choices to remain in or outside the waste and recovery sector. Furthermore, national governments could support local governments in implementing national policies and pursuing locally adapted and participatory approaches.

The report further states that financial resources could contribute to a just transition of the IWRS and of the people, communities and environments that are disproportionately affected by plastic pollution. This includes financing the establishment of waste management infrastructure, regulatory capabilities, and monitoring in areas where these aspects are lacking, while ensuring that this does not conflict with the interests of people and groups in vulnerable and marginalised situations. Financial resources may be dedicated to facilitating formal integration processes, implementing relevant infrastructure and equipment to ensure occupational safety and environmentally sound waste management, and ensuring fair remuneration for work. Financial resources may also support the establishment and strengthening of IWRS workers' cooperatives, associations and unions, as well as protecting livelihoods. This can aid in meeting targets linked to social inclusion and development when modernising waste management infrastructure, for example when upgrading open dumpsites to sanitary landfills. Financing to support a just transition of the IWRS can be secured through different means and at different levels. For example, it can be acquired directly through a global instrument to end plastic pollution,

through participatory global or national extended producer responsibility (EPR) schemes, through international financial institutions and funds, through innovative financing mechanisms, and from within municipal solid waste management systems.

Finally, a just transition of the IWRS needs to be tracked, in a standardised manner following pre-defined and co-developed indicators, definitions and methodologies. Currently, there is a lack of data and a limited understanding of the IWRS scale and activities around the world. A global instrument to end plastic pollution could include provisions for Parties to conduct participatory baseline assessments to address knowledge gaps on the role of the IWRS, the extent of existing networks and trade relations, socio-economic factors, and interlinkages with the formal sector.



Traitier Dumpsite, Port au Prince Haiti [UN-Habitat / Nao Takeuchi]

## NEW URBAN AGENDA

---

*59. We commit ourselves to recognising the contribution of the working poor in the informal economy, particularly women, including unpaid, domestic and migrant workers, to the urban economies, taking into account national circumstances. Their livelihoods, working conditions and income security, legal and social protection, access to skills, assets and other support services, and voice and representation should be enhanced.*



United Nations

# 1. Background

---

The informal waste and recovery sector (IWRS) is an integral part of municipal solid waste management (MSWM) systems across the world, especially in many cities in Africa, Asia and the Pacific, and Latin America and the Caribbean. The IWRS is especially active in under-served areas, supplementing, coexisting, and/or collaborating with formal MSWM operators. In Australia, North America, Europe and New Zealand, the IWRS also coexists with formal MSWM systems, often with state-of-the-art infrastructure. The IWRS contributes to sustainable cities by turning wasted resources into economic opportunities, reducing the impacts of pollution on the environment and public health, decreasing the economic costs of waste management for municipal budgets, facilitating circular waste management solutions, and mitigating greenhouse gas emissions.

While the New Urban Agenda<sup>3</sup> notes the important role of the informal economy and commits to supporting it, the resumed Fifth Session of the United Nations Environment Assembly (UNEA-5.2), which took place in Nairobi, Kenya, from 28 February to 2 March 2022, concluded with the passing of a resolution titled *End plastic pollution: Towards an international legally binding instrument*<sup>4</sup>, which recognises “the significant contribution made by workers under informal and cooperative settings to collecting, sorting and recycling plastics in many countries”.



A young man cleans recycle plastic bag in Dandora dumping site Nairobi, Kenya 2011 [UN-Habitat / Julius Mwelu]

This resolution further provides the mandate for a negotiating process towards developing an international legally binding instrument on plastic pollution, including in the marine environment, and indicates that “lessons learned and best practices, including those from informal and cooperative settings” should be considered in the Intergovernmental Negotiating Committee (INC). Thus, the UNEA-5.2 resolution constitutes an important catalyst towards recognising the ongoing and historical contribution of the IWRS to waste management and the inherent socio-economic injustices. Workers in the IWRS endure some of the most hazardous working conditions as well as high degrees of vulnerability due to precarious access to labour protection and social security, among other factors. Recalling the sustainable development principle of ‘leaving no one behind’<sup>5</sup>, alleviation of poverty, inequality, marginalisation, and the promotion of human and workers’ rights are all imperative in a just transition of the IWRS.

The negotiations towards a global instrument to end plastic pollution kicked off with an ad hoc Open-Ended Working Group (OEWG) in Dakar, Senegal, between 29 May and 1 June 2022. This meeting laid the groundwork for the subsequent five INC meetings, by drafting the Rules of Procedure and proposing the timetable.

Multi-stakeholder dialogues (MSDs) complimented the OEWG’s plenary sessions and informal negotiations, providing a stage for stakeholders to come together to raise and debate issues related to plastic pollution, its impacts and potential solutions. The discussions at the MSDs revolved around innovation across the plastic life cycle, the risks associated with the chemical content of plastics, and the need for more inclusive, just and environmentally sound management of plastic waste. Speakers also stressed the need for a sustainable transition towards a new plastics economy, involving all stakeholders across the life cycle of plastic, with specific consideration of informal workers who currently contribute to closing the loop<sup>6</sup> of plastic management in many countries around the world.

Delegations from Chile, Colombia, Kenya, Norway and Uruguay were amongst those reiterating the need to foster participation of workers from informal and cooperative settings, including waste pickers, in a just transition towards ending plastic pollution. Key in this regard is the inclusion of the knowledge and perspectives of the people who are most vulnerable to plastic pollution, as well as of those who are key in addressing leakages across the plastic value chain.

While the need for a just transition of the IWRS was highlighted in plenaries, informal negotiations and MSDs, key elements and a definitive strategy to enable a just transition remain to be clarified.



## About the report

Despite the emerging recognition of the significance and societal contribution of the IWRS, knowledge gaps persist around the IWRS' scale, plastic recovery capacity, network structures and functioning<sup>7</sup>, as well as the precarious socio-economic conditions of many of its workers. There is also a limited understanding of how the IWRS can be integrated into policies and practice to sustainably utilise its skills while empowering its livelihoods. As part of strategies to end plastic pollution, there is a need to recognise and promote key elements of sustainable development, such as inclusion and participation, human and labour rights, and access to social security, health care and fair wages for livelihoods in the IWRS. An improved knowledge base on interlinkages is key to achieving sustainable development, to holistically tackling the multifaceted challenge of plastic pollution, and to promoting a just transition of the IWRS.

To close existing knowledge gaps, the United Nations Human Settlements Programme (UN-Habitat) and the Norwegian Institute for Water Research (NIVA), in association with the International Knowledge Hub Against Plastic Pollution (IKHAPP) and with support of the Government of Norway, have explored possibilities for a just transition of the IWRS under a global instrument to end plastic pollution.

This report presents these possibilities and aims to increase knowledge and awareness on the role and opportunities for a just transition.

The report is informed by:

- » Virtual Expert Group Meeting (EGM)
- » Questionnaires distributed to waste picker organisations (WPOs) and local governments
- » Participation in the OEWG in Dakar, Senegal, in preparation for the INC meetings
- » Literature review of publications and reports by different stakeholders, including academia, civil society and intergovernmental organizations, as well as national and international regulatory documents
- » Direct expert consultation
- » Virtual stakeholder consultations on the draft findings and conclusions

The EGM was held in April 2022, with a three-hour session repeated twice a day for three consecutive days to enable participation from different time zones. Presentations were either held twice or a recording was shown at one of the sessions. While most presentations and discussions were in English, French and Spanish interpreters were present at one session per day. Around 50 experts representing civil society, WPOs, UN agencies, academia and the private sector participated.

Between June and July 2022, four different questionnaires were distributed to WPOs, intermediate traders, local governments and plastic recycling companies in English or Spanish, with the support of Women in Informal Employment: Globalising and Organising (WIEGO), the International Alliance of Waste Pickers, Mexico's PetStar programme and recycling associations. A total of 18 WPOs, two recycling companies and 19 municipalities from 23 countries in Africa, Asia and the Pacific, Europe, North America, and Latin America and the Caribbean responded. No response from intermediate traders was received.

Two virtual stakeholder consultations were held on 14 October 2022 to receive feedback on the report's draft findings and conclusions. During the consultations, key terminologies, the main elements of the report and the recommendations were presented and discussed with more than 60 participants from civil society, WPOs, UN agencies and academia. Additionally, written comments on a summary of the report and the presentation were received. The report was also reviewed by independent experts in the field.

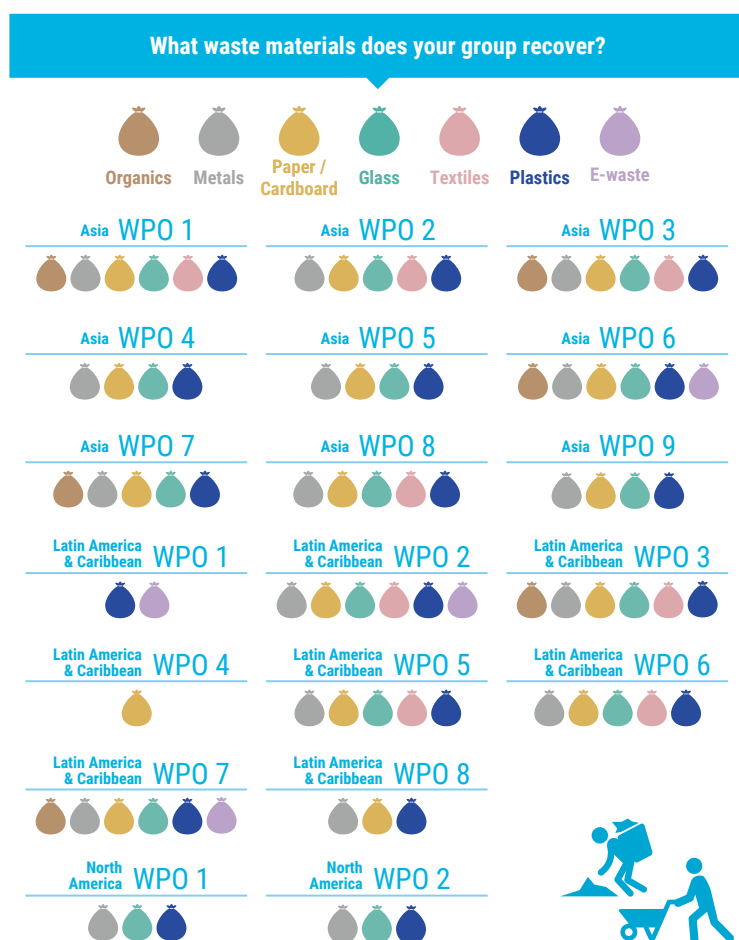
The interlinkage between the environment, public health and mismanaged waste and associated pollutants from open burning of waste and chemicals are important elements of the plastic pollution discourse. While this

report has limited its scope to the IWRS, the just transition concept, is equally significant for other stakeholders who are impacted by plastic pollution and related policy developments. These include representatives from indigenous and small-island state communities, informal settlements, start-ups and micro-, small- and medium-sized enterprises, and other workers in the informal economy (e.g., street vendors). The narrative presented throughout this report is weighted towards a just transition of IWRS workers at the bottom of the plastic recovery chain (i.e., waste pickers and collectors). This is because these actors:

1. are commonly regarded as the most vulnerable stakeholders in the IWRS,
2. have on-going organisation efforts and global representation in the International Alliance of Waste Pickers, and
3. have worked towards gaining recognition in current discourse.

**FIGURE 1**

Survey responses by waste picker organisations to “What waste materials does your group recover?”.



Furthermore, this report narrows its focus to plastic waste and the possibility for a just transition of the IWRS through a global instrument to end plastic pollution. However, plastic waste is part of the municipal solid waste stream and actions to tackle leakages also need to consider other types of waste, such as paper and cardboard, metals, glass and organics. Acknowledging these synergies can contribute to reducing environmental pollution while improving working and living conditions of people in poor and vulnerable situations, such as the urban poor. Furthermore, at the lower levels of the IWRS, workers and enterprises rarely focus solely on plastic waste, due to its relatively low market value compared to other discarded materials and the limited availability of higher value plastics. This was clear from the survey conducted, where 18 out of 19 WPOs indicated that they handle plastics, but always together with other materials (75% of respondents handle at least four different types of materials, see Figure 1).

While recognising that a lifecycle approach<sup>8</sup> requires the development of up-, mid- and downstream measures to tackle plastic pollution from the source to the environment, the scope of this report focuses on downstream measures. These include “repair, refurbishment and recycling, the trade of plastic waste and the disposal of residual wastes”<sup>9</sup>, as this is the space in which the IWRS operates. As much as up- and midstream measures are urgently needed to curb plastic pollution and enable more efficient downstream processes, downstream solutions for the improvement of MSWM systems and enhancement of material recovery should be developed in a socially inclusive manner. The is of paramount importance since an estimated 2 billion people lack access to regular waste collection services and 3 billion people rely on open dumpsites<sup>10</sup>.



# 2.

## Plastic pollution, the IWRS and striving to achieve sustainable development

---

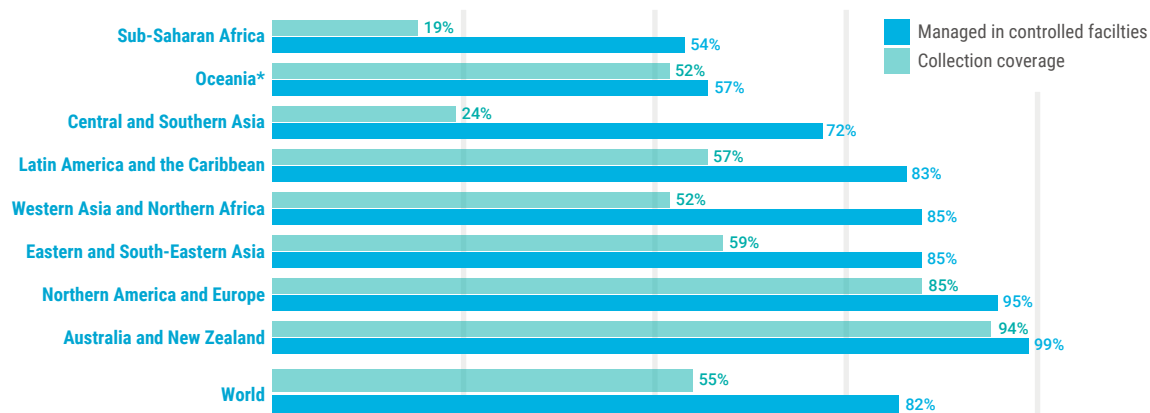
Plastic pollution has become a key item on the international environmental agenda, most recently highlighted by the UNEA-5.2 resolution to end plastic pollution. Global plastic pollution poses a major threat to human health, livelihoods, sustainable economies and societies, the climate and ecosystems across the world<sup>11</sup>. The impacts span the life cycle of plastics and the burdens of mismanaged waste and pollution often affect marginalised and vulnerable livelihoods and communities<sup>12</sup>. Considering increasing plastic production and consumption patterns, persisting challenges of illegal waste trade, and more diversified pollution sources, addressing plastic pollution is unfolding as a challenge of extraordinary complexity<sup>13</sup>.

There is a consensus that the way the world currently produces, consumes and disposes of plastics is unsustainable and may exceed planetary boundaries<sup>14</sup>. Using the global estimate for Sustainable Development Goal

(SDG) Indicator 11.6.1 and the resulting plastic emissions<sup>15</sup>, it is estimated that the global population generated 2.4 billion tonnes of municipal solid waste in 2018, of which 82% was collected and 55% was managed in controlled facilities<sup>16</sup>. This means that 432 million tonnes and 1.08 billion tonnes of municipal solid waste remain uncollected or are managed in uncontrolled facilities, such as open dumpsites, respectively, and are therefore negatively impacting the environment. Plastic waste makes up 12% of the global municipal solid waste, amounting to 288 million tonnes of plastic waste per year. According to this estimate, the total global plastic debris<sup>17</sup> emissions are 19.3 million tonnes per year and the total global plastic openly burnt<sup>18</sup> is 40.8 million tonnes per year, resulting in a total of 60.1 million tonnes of plastic per year from municipal solid waste streams that pollute the environment.

**FIGURE 2**

Global estimate of SDG Indicator 11.6.1 by UN-Habitat.



\* excluding Australia and New Zealand

Globally, the rates of plastic recycling have been low due to: 1) inefficient solid waste collection systems, and 2) many plastic products not being designed with recycling in mind (e.g., multi-layered plastic (MLP) products and plastics containing additives). In addition, the commodity pricing associated with the most popular plastic recovery activities, such as the crushing and baling of PET and HDPE polymers, is for example heavily affected by fluctuations and market volatility in the oil and gas sector. Growing advocacy against problematic, inherently non-recyclable plastics (i.e., multi-layered, mixed, or low-grade materials) has raised awareness on how solutions to plastic pollution lie in the ethical and considerate design and manufacturing of plastic products, particularly in fast-moving consumer goods sectors<sup>19</sup>. Plastic pollution also needs to be addressed beyond isolated sectors and national jurisdictions, considering the transboundary nature of aquatic environments and global plastic value chains, including plastic production and supply, and the transnational waste trade.

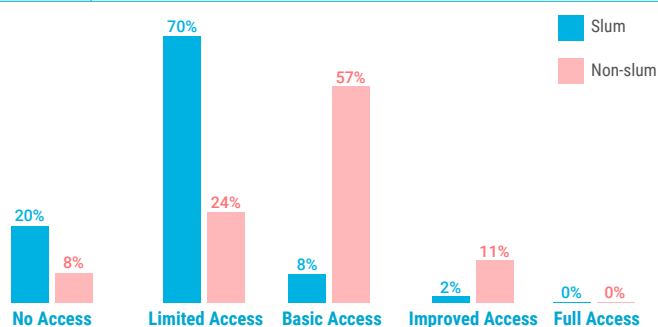
**Plastic production and waste can pose risks not only to the environment but also to human health;** from the extraction of oil and gas during plastic production, to the chemicals released during plastic refining and the mismanagement of plastic waste and contamination of water, soil and air. Contaminated areas or dumpsites impose

significant risks to health and wellbeing for both people living in the vicinity and working with waste<sup>20</sup>. Plastic pollution results from uncollected municipal solid waste, uncontrolled waste management facilities, and even when the waste is collected and transported to transfer stations, recovery facilities and disposal facilities.

An unpublished UN-Habitat survey conducted in 2021 in Nairobi, Kenya, and Kampala, Uganda, on household access to a basic waste collection service<sup>21</sup>, revealed an enormous service coverage gap between non-slum and slum populations. More than 90% of the population in slums do not have access to a basic waste collection service, while almost 70% of the population in non-slum areas do (see Figure 3). This indicates that plastic pollution from uncollected waste largely occur in the most impoverished urban areas, where governments and formal service providers struggle to offer a basic waste collection service. Many cities in Africa, Asia and the Pacific, and Latin America and the Caribbean are also struggling to reach a basic level of control of waste management facilities, with local governments challenged by a lack of financial and technical resources to properly maintain and operate the facilities. This means that these cities rely for the most part on open dumpsites.

**FIGURE 3**

Household survey results on access to basic waste collection service in Nairobi, Kenya, and Kampala, Uganda.



IWRS actors mainly become active where MSWM capacity gaps exist, sometimes providing the only form of solid waste collection and recovery service. On the one hand, the IWRS plays a critical role in reducing unmanaged waste and plastic pollution, contributing to resource recovery, increasing circular MSWM solutions, reducing climate emissions and protecting public health. On the other hand, IWRS workers unjustly bear the costs of mismanaged waste and pollution, as they tend to be exposed to hazardous and dangerous working environments, often without proper protective gear. They also face stigmatisation, marginalisation, exploitation and poverty. The value of recoverable materials, and thus the income in the IWRS, is linked to external market dynamics, which fluctuate depending on global virgin oil prices, regulatory developments, demand for recycled plastics and sudden market changes. For example, the COVID-19 pandemic increased medical waste generation and the use of single-use plastics, raising questions of what and who constitutes essential services<sup>22</sup>. It also exposed IWRS stakeholders to added risks of being infected with the virus and becoming ill. Moreover, COVID-19 impacted the recycling industry, as prices of recyclables fell when countries closed borders and banned the trade in recyclables. Additionally, many individuals who were left unemployed by measures to curb the spread of the virus, turned to IWRS activities, thus increasing its size. The combination of these factors led to a significant income reduction of IWRS workers, especially waste pickers, pushing many to the edge of poverty<sup>23</sup>.

## SUSTAINABLE DEVELOPMENT GOALS



The 2030 Agenda for Sustainable Development and its 17 SDGs adopted by the United Nations in September 2015 includes several targets relevant to a just transition of the IWRS. These include: poverty reduction (Target 1.1, 1.2), provision of social protection for all (Target 1.3), access to basic service (Target 1.4), elimination of dumping to improve water quality (Target 6.3), transition from the informal to the formal economy (Target 8.3), global resource efficiency (Target 8.4), decent work (Target 8.5), elimination of forced labour, slavery and child labour (Target 8.7), safe and secure working environments (Target 8.8), slum upgrading (Target 11.1), MSWM (Target 11.6), material footprint (Target 12.2), recycling enhancement (Target 12.5), and marine litter (Target 14.1). Consequently, a just transition of IWRS contributes to the achievement of several SDGs.

The following sections provide an overview on the IWRS, its contribution to sustainable cities and challenges its stakeholders face. While the IWRS typically collects and handles different types of materials, the focus here is on the recovery of plastic waste. However, it should be noted that interventions to improve plastic waste management and reduce pollution also need to holistically address other forms of waste and recyclables to be environmentally, socially and economically sustainable.



Burning waste pile in dumpsite. Waste catches fire when temperature in the pile of waste gets high from decomposition [UN-Habitat / Nao Takeuchi]

## 2.1

### Overview of the IWRS

---

Around 2 billion people in the world's employed population make their living in the informal economy<sup>24</sup>. The IWRS is a sector of this economy where workers and economic units are involved in solid waste collection and recovery activities which are, in law or in practice, not covered or insufficiently covered by formal arrangements. Informal waste work is often a consequence of limited livelihood opportunities in the formal economy. Although the IWRS is more prominent in countries in Africa, Asia and the Pacific, and Latin America and the Caribbean, it is also present in for example Europe and North America. Conservative estimates suggest that the IWRS consist of 15 million people<sup>25</sup>, recovering up to 58% of the recycled waste globally<sup>26</sup>. However, these estimates are highly uncertain. Beyond case study assessments, reliable and systematic statistics on how many people have IWRS activities as their primary or secondary means of livelihood do not exist. According to data collected with the UN-Habitat's Waste Wise Cities Tool (WaCT), the informal share of municipal solid waste recovery chains is higher than 80% in many cities, for example

in Nairobi and Mombasa in Kenya, Kep and Sihanoukville in Cambodia, and Khulna in Bangladesh. The WaCT also captured the estimated number of waste pickers working at disposal sites, which are for example 1,500 in Dakar, Senegal; 600 in Dar es Salaam, Tanzania; 1,820 in Lagos, Nigeria; and 2,000 in Nairobi. Despite the lack of data, existing estimates and studies indicate that the extent and contribution of the world's IWRS is significant, representing a workforce of millions of people as well as established international trade relationships.

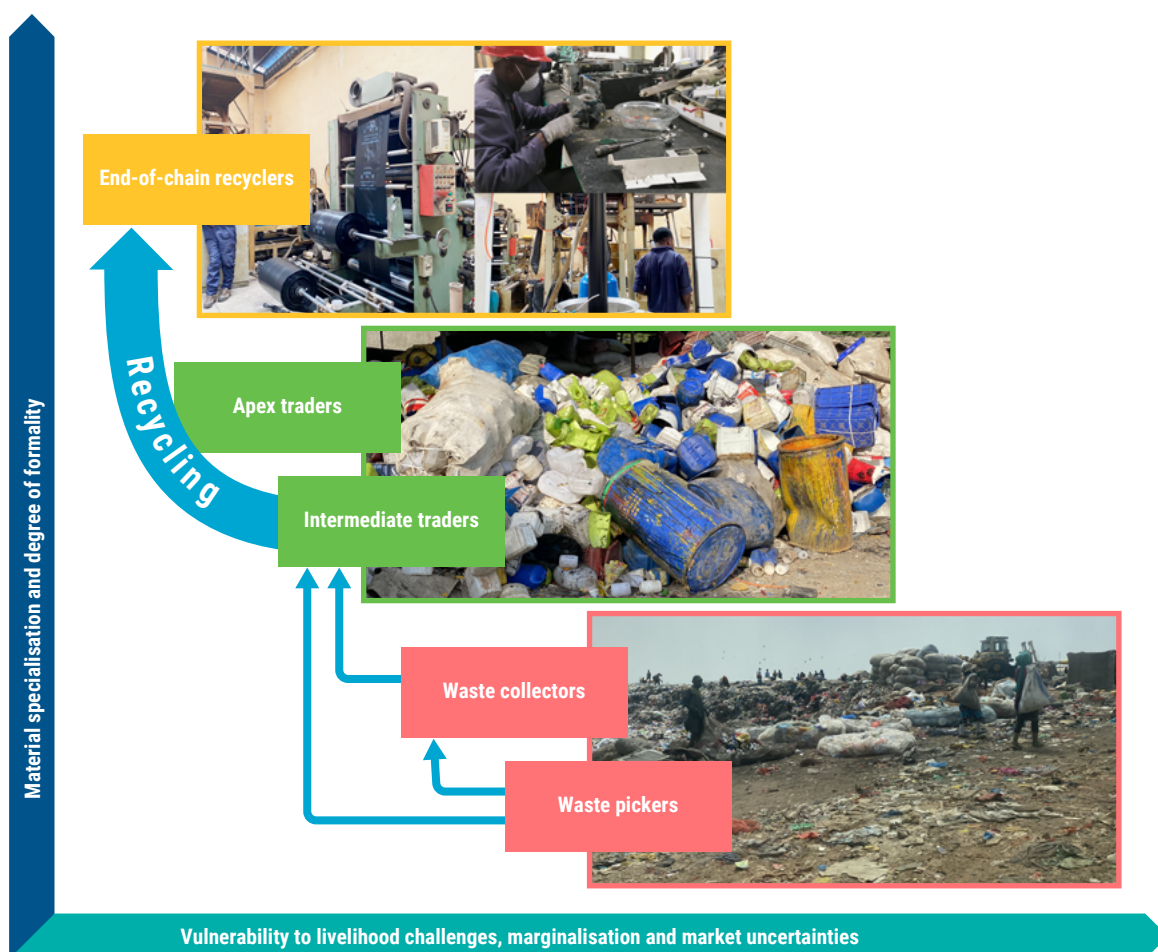
As illustrated in Figure 4, plastic materials of value typically move up the recovery value chain from waste pickers and collectors to intermediate traders, who sometimes consist of small- and medium-sized neighbourhood shops, and then to apex traders, consisting of larger aggregation and processing units. Materials are eventually sold to end of chain recyclers as secondary raw materials. Segregation into specific plastic categories occurs at most stages of the recovery value chain<sup>27</sup>. Waste pickers typically collect items and materials from public spaces, open



Sorted plastics for recycling [UN-Habitat / Nao Takeuchi]

**FIGURE 4**

Conceptual diagram of IWRS actors in the informal plastic recovery chain, including their degree of vulnerability, as well as material specialisation and formality<sup>28</sup>.



dumpsites or landfills, and/or waste bags and bins on streets. They sell the recyclables to intermediate or apex traders. Sometimes, they pay for access to public or privately owned landfills. Informal waste collectors collect mixed or source-segregated solid waste from waste generators and either drop it at formal or informal collection points, or sell recyclables to intermediate or apex traders. While arrangements differ across localities, informal waste collectors typically charge on the spot for mixed waste collection, although in some places, they purchase segregated recyclables from households and businesses. Informal waste collectors often use wheelbarrows or pushcarts to collect and transport the recyclables to traders and the waste to collection points or temporary dumpsites. The municipality or formal waste collectors then collect and transport the waste from there to designated disposal sites.

Generally, informality decreases when moving up the plastic recovery value chain, as illustrated in Figure 4. However, there are significant contextual and geographical aspects to this simplified representation of material flows, and many IWRS workers operate across and between value chain stages. Material specialisation, storage capacity and income levels tend to increase at the more advanced stages, while workers engaged at the lower stages are often regarded as being the most vulnerable to adverse socio-economic livelihood impacts.

**FIGURE 5**

Survey responses to the question “Where does your group recover waste materials?”. Each line is the response from one WPO.

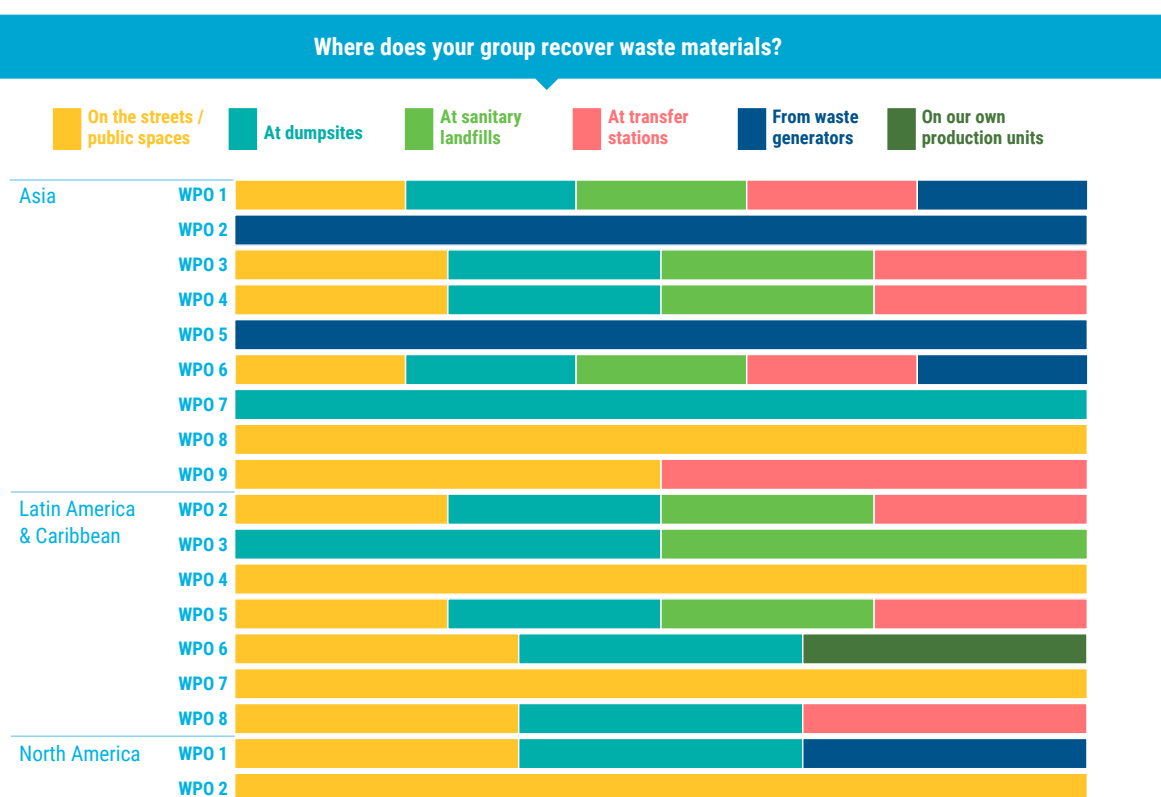


Figure 5 shows that the places from which waste is collected by the WPOs who responded to the survey, range from focussing on certain places, such as streets and public spaces, to a variety of places, including dumpsites, transfer stations, sanitary landfills and streets.

The IWRS is typically characterised by small-scale, unregulated or only partially regulated collection, processing and recovery activities, providing a source of income for poor and marginalised workers<sup>29</sup>. However, it is increasingly becoming recognised as consisting of entrepreneurs and established micro-businesses that are highly skilled in their occupations<sup>30</sup>. This is an important consideration for the development of a global instrument on plastic pollution, as it means that stakeholders in the IWRS hold knowledge, skills and interests that are valuable to the development of solutions to end plastic pollution.

The current lack of data on the IWRS is a significant challenge for the development of targeted pollution reduction strategies that build on existing informal structures and support sustainable and just livelihoods. So far, the contribution of the IWRS has often been underestimated or not recorded in national statistics, making formulation of policies to engage and protect the rights of this sector challenging. There is also a prevailing lack of engagement with the larger IWRS, as studies and statistical snapshots have primarily focused on mapping informal waste pickers and collectors.

## 2.2


### Contribution to sustainable cities and circular waste management solutions

The societal, environmental and economic role of the IWRS is significant, especially in many countries in Africa, Asia and the Pacific, and Latin America and the Caribbean. In some communities, IWRS workers provide the only form of municipal solid waste collection and recovery. In others, they supplement the formal MSWM system, thereby reducing the environmental, economic and societal costs of uncontrolled waste leaking into the environment, the open burning of waste, and the contamination of landfill sites.

Urbanisation and population growth intensify the pressure on urban infrastructure in many cities already overburdened by the provision of basic urban services like solid waste management (SWM), due to the lack of resources to meet the demand. Many urban and peri-urban areas, especially in Africa, are marred by inadequate waste collection coverage. This is usually caused by limited government funding, inefficient payment systems to cover waste collection, limited willingness of waste generators to pay for waste collection and inadequate road infrastructure, which restricts the access of waste collection vehicles. As a result,

uncollected and uncontrolled solid waste generates air, water and land pollution that pose significant risks to human health and the environment.

By providing solid waste collection services and diverting waste from uncontrolled disposal sites, the IWRS [contributes to cleaner communities and protects public health](#). Uncollected waste can block the flow of water, contributing to urban flooding. Stagnant water can breed mosquitos that transmit malaria, dengue and other diseases. Uncollected and uncontrolled waste can attract flies, rodents and other organisms that transmit various diseases. Residents without waste collection may also burn their waste in their backyards. This leads to the emission of carcinogenic compounds, such as dioxins and furans, that can cause respiratory diseases, analogous to the open burning of waste in uncontrolled disposal sites<sup>31</sup>. Women and children are the most affected, as they are often the ones in charge of household waste disposal, either through open burning or indiscriminate dumping, when formal or informal waste collection is not available<sup>32</sup>.



The private company Hygiène et Salubrité du Cameroun (Hysacam) signed a waste management public-private partnership (PPP) agreement with the government of Cameroon. However, the PPP failed in some parts of the country because Hysacam could not access 60% of the communities due to the inability of their waste collection equipment to navigate the roads. These areas therefore continued to be served by the IWRS actors, whose collection equipment could easily manoeuvre in the terrain<sup>33</sup>. Through the IWRS services, the communities were protected from the waste-related public health issues that would have arisen if the waste had been disposed of in the streets or by open burning.

Youth group who collects waste in slum in Yaoundé, Cameroon [UN-Habitat / Kirsten Milhahn]



Low-carbon community waste collection in Indonesia [YAPEKA]

The IWRS also **plays a significant role in moving towards a circular economy**. In many countries around the world, municipalities lack recycling programmes. However, that does not mean that recycling does not exist in those locations. There, the IWRS carries out the bulk of the work, recovering recyclable materials, including sorting and aggregation. It is for instance estimated that about 80% of plastic bottles recycled in Tanzania are recovered by the IWRS from dumpsites<sup>34</sup>. In South Africa, IWRS actors are responsible for the recovery of 90% of paper and packaging waste<sup>35</sup>, and in India, for 70% of PET<sup>36</sup>. In Brazil, the IWRS contributes to about 90% of national recycling<sup>37</sup>. These figures show that the IWRS contributes immensely to the circular economy in those countries.

The IWRS further **contributes to reducing greenhouse gas emissions** by:

1. enabling recycling, which is less energy intensive than producing virgin plastics and reduces natural resource extraction,
2. diverting biodegradable materials from open dumpsites, which reduces greenhouse gas emissions such as methane,
3. using less energy-intensive modes of waste sorting and transport, and
4. preventing open burning of waste by offering collection services<sup>38</sup>.

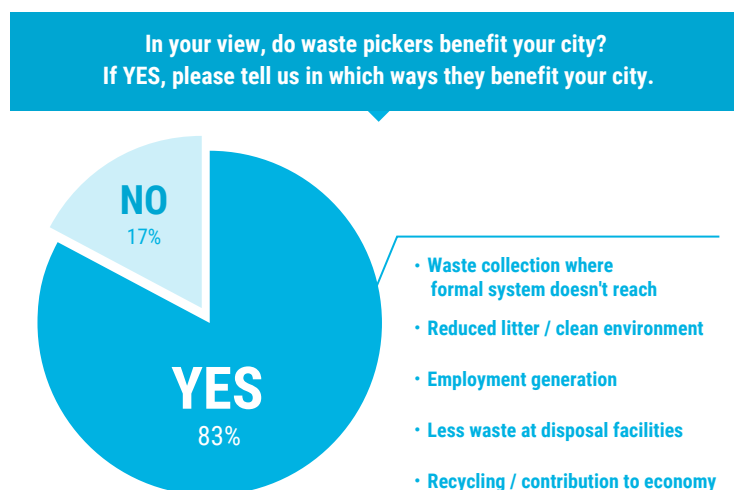
WIEGO offers a calculator tool for measuring the avoided greenhouse gas emissions from IWRS activities<sup>39</sup>. The Sure We Can recycling centre in New York City, USA, calculated that they prevent the emission of 1,905 tonnes of carbon dioxide by collecting and sorting recyclables manually<sup>40</sup>.

IWRS activities also provide savings for municipal budgets. Collecting, transporting and disposing of municipal solid waste represent a large expenditure for cities, especially in low-income countries, where it accounts on average for 19% of municipal budgets<sup>41</sup>. Each tonne of solid waste that is collected and recovered by the IWRS translates into savings for municipalities in terms of collection costs, trucks, staff and fuel. The reduction in the amount of waste that needs to be transported to the final disposal sites also resulting in savings. For example, the IWRS saved the South African government USD 20-50 million per year in landfill costs, with little or no assistance from the municipalities and despite the unfavourable IWRS working conditions<sup>42</sup>. In Cairo, Egypt, the diversion of recyclable waste away from landfills reduced municipal costs by USD 16.9 million and in Lusaka, Zambia, by USD 1.7 million per year<sup>43</sup>. The IWRS may also benefit industries and businesses, as substituting raw materials with recycled content saves costs related to energy and water.

Figure 6 and Figure 7 show the survey responses received from local governments and WPOs on the benefits of waste pickers to cities. Over 80% of local government representatives agree that waste pickers benefit their cities.

**FIGURE 6**

Survey responses from local governments to the question "In your view, do waste pickers benefit your city? If YES, please tell us in which ways they benefit your city".



**FIGURE 7**

Number of survey responses from WPOs to the question "In your view, how do waste picker activities benefit society?"

**In your view, how do waste picker activities benefit society? Please list.**



The IWRS clearly contributes to sustainable cities and more circular waste management solutions. Yet despite the societal, economic and environmental benefits, the rights, health and livelihoods of IWRS workers are seldom a priority in policy deliberations. Due to its diverse activities, the IWRS provides a livelihood to millions of individuals worldwide, mostly but not only in Africa, Asia and the Pacific, and Latin America and the Caribbean. It is especially important for individuals and groups in vulnerable situations, such as migrants, refugees, single mothers, children, youth, people with disabilities, and the elderly, who have limited alternative income-generating opportunities in the formal sector. Some of the overarching challenges faced by IWRS workers are presented in the following section. These provide a starting point for understanding why a just transition of the IWRS is important for sustainable development, and a backdrop to key considerations for a global instrument on plastic pollution.

## 2.3

### Challenges faced by the IWRS

While the IWRS saves significant municipal expenditures related to waste collection, handling and processing, IWRS workers disproportionately bear the true costs associated with mismanagement of waste and plastic pollution. Workers often face unhealthy working conditions and are exposed to severe occupational and health impacts from hazardous materials<sup>44</sup>. At the same time, they lack access to public social security schemes, such as health care, unemployment insurance, individual retirement benefits and pension plans. It is crucial that these aspects are considered in a just transition, to leave no one behind in the process towards ending plastic pollution.

Although the IWRS provides a key source of livelihood, **many IWRS individuals/workers are trapped in a cycle of poverty**. While some workers can generate higher incomes than the minimum wage, others earn so little that they face difficulties supporting their families. Studies have highlighted the extreme poverty in which many waste pickers live<sup>45</sup>. A study from South Africa found that a waste picker's income can vary significantly, with the highest average income per day of USD 5.63 being more than five times the lowest average of USD

1.11. However, the average weekly income of USD 8.99 demonstrates that the lower daily incomes dominate<sup>46</sup>. IWRS workers, particularly on the lower levels of the recovery value chain, often do not own assets other than basic tools, such as wheelbarrows or pushcarts, and usually cannot afford adequate accommodation and food. Hence, many waste pickers and their families live on or close to dumpsites, with limited access to sanitation facilities and clean water.

It is also common for children and the elderly to engage in waste picking<sup>47</sup>. By working instead of attending school, children reduce their possibility of breaking the poverty cycle, which can result in several generations working in the IWRS. Women who are waste workers are often the most disadvantaged, as they tend to work in more labour-intensive and hazardous environments, and often have a comparatively lower income than men<sup>48</sup>. Studies have indicated that higher value recyclables (e.g., metals and hard plastics) are often aggressively protected and hoarded by men, while less valuable waste recyclables (e.g., glass and plastic film) and discarded materials with a higher risk of contamination (e.g., paper and organics) are left for women to pursue<sup>49</sup>.

**27%** of waste picker organisations that responded to the survey indicated that children are part of their activities.

**10%** had only women as members and none had only men.



Children working in Dandora Dumpsite, Nairobi, Kenya [UN-Habitat / Shiho Jinno]

Exploitation is another factor that contributes to exacerbating vulnerabilities at the lower levels of the IWRS. For example, traders in the recovery value chain purchase recyclables at prices that give waste pickers only a negligible fraction of the material value. Control and administration of waste management infrastructure (e.g., a formal and supervised waste transfer station) or the forming of cooperatives, can mitigate these inequalities by installing a system of waste governance that is inclusive and equitable<sup>50</sup>.

The occupational health risks IWRS workers face depends on the type of activity they perform and the place where they work. Waste pickers and informal waste collectors are at high risk due to their direct contact with all types of waste, including hazardous substances. Many waste pickers scan through waste bins on the streets and comb through waste heaps on dumpsites without adequate personal protective equipment (PPE). It has been reported for instance that waste pickers in Dar es Salaam suffer from poor respiratory and physical health due to a lack of access to PPE<sup>51</sup>. Their limited use is a consequence of limited availability or financial capacity to purchase PPE, lack of education and awareness around means of protection, or personal preference for better manoeuvrability without PPE. Some factors that pose health and safety risks for workers at different stages in the IWRS include hazardous and infectious components, toxic emissions, heavy manual labour, fires, and landslides (see Table 1).



38 years old Ms. Cecilia digs for items to sell and food waste to eat at the dumping site in Chakarail, Kenya [UN-Habitat/Julius Mwelu]

TABLE 1      Health and safety risks faced by workers in the IWRS.	
Risk Factors	Sources of Potential Risks
Waste composition	Hazardous and infectious components such as dust, gases, chemicals, sharps and needles, leachate.
Organic waste decomposition	Greenhouse gas emission, bioaerosols, leachate, dust, as well as their toxic or infectious abilities.
Waste handling	Pushing of wheelbarrows or pushcarts over a long distance, manual lifting of heavy equipment, shovelling, bending down for long periods of time.
Waste processing	Fire incidents, odour from decomposing waste materials, vibration from baling or shredding equipment, air and water emissions.
Waste disposal	Landslides at the dumpsites, fire incidents, odour from decomposing waste materials, bites from rodents and vermin.

Examples of the health and safety risks faced by IWRS actors include the devastating collapse of landfills. A case in point is the Hulene dumpsite in Maputo, Mozambique, where at least 16 waste pickers were killed in 2018 due to a landslide caused by heavy rains. The dumpsite had served as the final disposal site for Maputo since the 1960s and many members of the community made a living by recovering and selling recyclable waste from the dumpsite lived on its perimeter<sup>52</sup>.

According to a study conducted by the International Alliance of Waste Pickers, IWRS workers in Dar es Salaam describe their work as exhausting, dangerous and unhealthy<sup>53</sup>. 43 out of the 50 informal waste workers interviewed in the study reported that they had been injured or admitted to a health facility in the last year due to occupational activities. Some of the health issues reported by the workers included airborne illness, animal bites, cuts, bruises and fungal infections. None of the informal workers involved in the study wore any PPE and none had medical insurance coverage. A UN Special Rapporteur report about workers handling electronic waste (e-waste) in India noted that only 3-5% of e-waste is recycled in authorised recycling facilities<sup>54</sup>. Most of the e-waste is collected, dismantled and processed by the IWRS, largely by hand using rudimentary techniques. Some 80,000 workers, including women and children, earn their livelihood by breaking down old computers and other high-tech devices to recover precious metals such as gold, copper and silver. Workers recovering glass by hammering cathode ray tubes or heating circuit boards to remove capacitors are a common sight in most e-waste workshops. Workers surveyed did not use any PPE to guard against the release of hazardous substance.

The occupational health and safety issues associated with the IWRS activities could be mitigated if SWM systems are improved and integrate the IWRS, as the following example shows:



*After the collapse of a 20-year landfill in the city of Mar del Plata, Argentina, the World Bank supported the national government to construct a new sanitary landfill that met high safety and environmental standards. A waste sorting and recycling facility was also installed at the new disposal site. Over 300 members of the local waste picker cooperative, who had previously lived and worked at the collapsed site without economic or social security, were employed to work in the sorting and recycling facility. In the new integrated system, local waste pickers now work under much safer and healthier conditions, earn higher prices for their recyclables, and are no longer reliant on a dangerous dumpsite for their livelihoods<sup>55</sup>.*

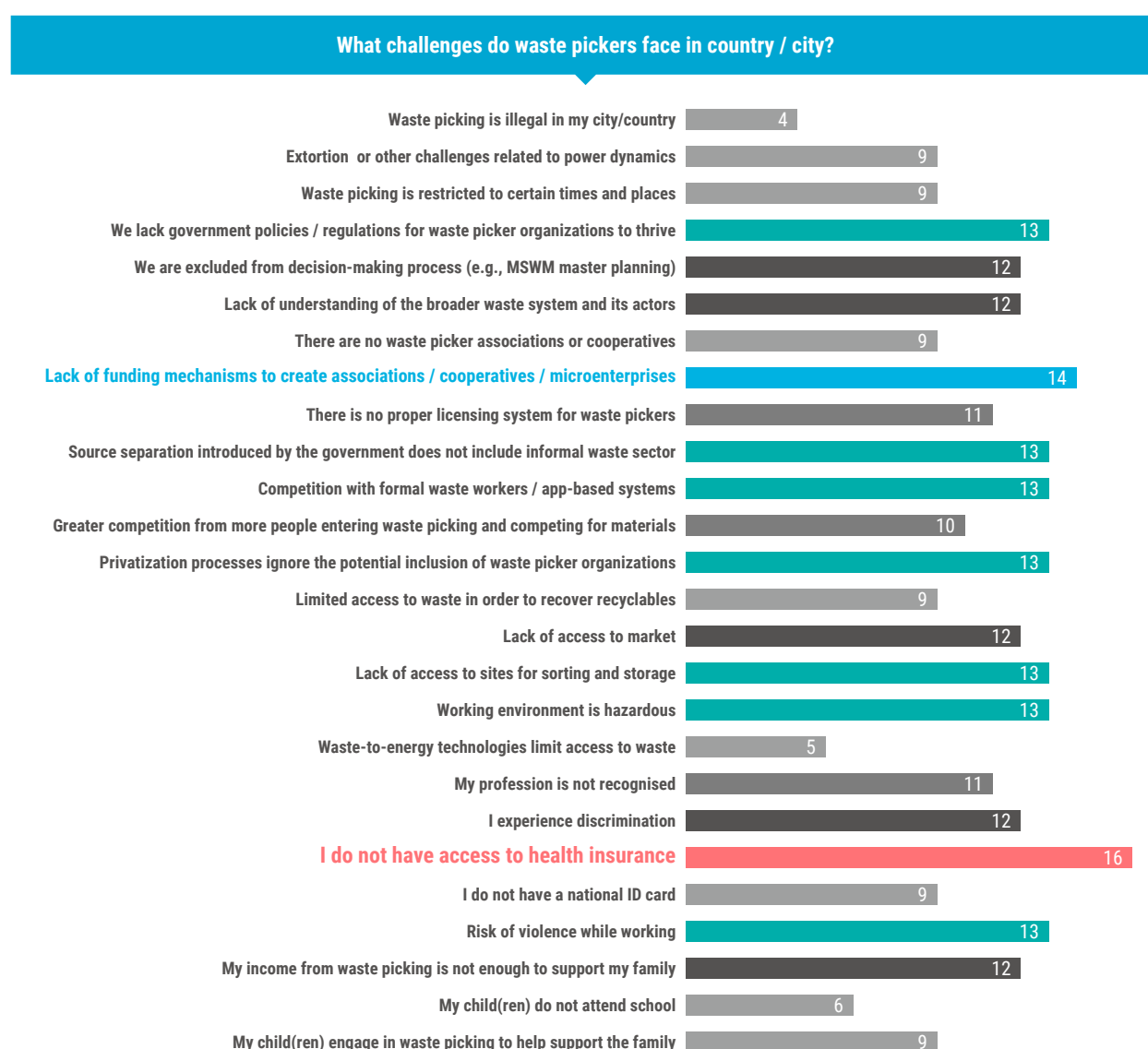
Another challenge IWRS actors face is the **lack of societal and official recognition**, which entails discrimination and exclusionary policy environments. During most of the 20th century, IWRS workers were commonly marginalised or seen as obstacles to the modernisation of waste management services. Consequently, waste picking activities were banned in many cities, contributing to the harassment of IWRS workers. The current situation in some places in the world has not improved. For example, in a city in Africa, local authorities have recently banned IWRS workers from moving around with their pushcarts, as these are seen as security risk to the residents. In some incidences, IWRS actors caught collecting waste were arrested<sup>56</sup> and pushcarts from IWRS workers were confiscated<sup>57</sup>.

Improved MSWM is increasingly seen as a key tool to reduce plastic pollution. In a move to address the interlinked challenges of waste and pollution, some countries are adopting waste management strategies that involve formalising or privatising waste collection and recycling services, often without considering existing IWRS activities. As a result, IWRS workers are at risk of being left behind and losing their source of income and livelihood<sup>58</sup>.

This particularly becomes a challenge when IWRS actors are [restricted access to recyclables and waste disposal sites](#), for example due to the privatisation of waste management services or upgrading of open dumpsites to sanitary landfills. Figure 8 shows the most common challenges encountered by the WPOs who responded to the survey.

**FIGURE 8**

Survey responses from waste picker organisations on “What challenges do waste pickers face?”





Waste pickers working in Dandora Dumpsite, Nairobi Kenya [UN-Habitat / Julius Mwelu]

Despite these challenges, evidence also suggests that there have been improvements in recognising IWRS activities and actors in the last two decades. Numerous countries have begun to develop more supportive policies to improve working conditions in the IWRS. While the development of such initiatives is mostly carried out by government authorities with support from international donor agencies, national non-governmental organisations (NGOs) and community-based organisations often take the lead.

A just transition of the IWRS involves recognising and mitigating the abovementioned livelihood risks and challenges. To leave no one behind, this should be achieved through supportive policies and interventions that integrate IWRS workers in the process of MSWM system improvement, enable them to operate in a safe working environment, and promote access to social security schemes. The following chapter explores key elements to consider for a just transition of the IWRS in the context of a global instrument to end plastic pollution. It includes relevant concepts, such as environmental justice, human and workers' rights, and stakeholder participation, draws on experiences from relevant existing Multilateral Environmental Agreements (MEAs) and integration practices, and considers the need for financing, baseline data and monitoring.



# 3.

## Elements to consider for a just transition of the IWRS in the context of a global instrument

---

The concept of a just transition is understood differently across different socio-economic contexts and geographies but is being increasingly seen as an approach that can address the interlinked challenges of pollution, climate change, inequality and poverty. This report argues that a just transition of the IWRS towards sustainable production and consumption of plastic should be designed in a manner that is as fair, inclusive and equitable as possible, generating and preserving decent work opportunities and leaving no one behind. It means enabling IWRS workers to pursue their livelihoods in a dignified manner, either inside or outside of the sector based on their choice. Moreover, key elements of a just transition include official and legislative recognition, protection of human and labour rights, access to social services and health schemes, and fair payment for all IWRS stakeholders. Implementing such a transition requires the involvement of all workers and organisations impacted by the shift, including

waste pickers, informal waste collectors, intermediate and apex traders, and informal workers engaged in transport, cleaning and recycling activities. Note: Local definitions of IWRS actors may vary and work activities may traverse these categories.

The following sections explore ways in which these elements can be included in the negotiations and under the scope of a global instrument. This is done by highlighting relevant concepts that need to be considered, drawing on lessons learned from existing MEAs, identifying existing frameworks, policies and practices that aim at recognising and integrating the IWRS, and outlining the need for financing, baseline data and monitoring.

## 3.1

### Relevant concepts

To lay the foundation for a just transition of the IWRS, environmental justice, human and workers' rights, and the need for active and meaningful stakeholder participation are essential.

#### Environmental justice

The concept of 'environmental justice' has emerged in response to environmental inequities, threats to public health and human rights, unequal protection in and enforcement of policies, and disparate treatment of poor and marginalised communities that have occurred since the 1970s<sup>59</sup>. Environmental justice has traditionally been linked to the inequitable distribution of waste and pollution but has grown to encompass spatial and temporal dimensions of justice and inequality across diverse cultural, social and environmental contexts<sup>60</sup>. It increasingly includes the recognition of power dynamics and complex interactions among injustices. It also encompasses mechanisms that address different senses of justice, knowledge acquisition and stakeholder interests, particularly of those that are most impacted by the injustices linked to development, such as IWRS workers.

Solutions aiming to promote environmental justice must recognise that environmental degradation and poverty are interlinked threats to sustainable development. To achieve the 2030 Agenda for Sustainable Development, the needs of those who are disproportionately affected by pollution around the world must be prioritised. This is an essential element of leaving no one behind in a just and sustainable transition towards ending plastic pollution.



Kibera slum, Nairobi, Kenya [UN-Habitat/Julius Mwelu]

Justice in political practice is understood as a balance between the interlinked elements of<sup>61</sup>:

1. **(Mal)Distribution** of environmental costs and benefits
2. **Recognition** of and **respect** for the personal dignity of individuals and their needs and livelihoods in relation to the environment
3. **Procedural justice** ensuring meaningful involvement in environmental decision-making
4. **Capabilities** linked to ensuring the multi-dimensional aspects of wellbeing

Table 2 illustrates how these elements of justice may be applied to ensure a just transition of the IWRS under a global instrument on plastic pollution<sup>62</sup>.

**TABLE 2** Applying interlinked elements of justice to the scope of a global instrument on plastic pollution<sup>63</sup>.

Interlinked elements of justice		Actions promoting a just transition of the IWRS under a global instrument <sup>a</sup>
1 <b>(Mal) Distribution</b>	Addressing the unjust and unequally distributed environmental costs of plastic pollution being borne by marginalised and vulnerable communities.	Mitigating the unequally distributed impacts of plastic pollution across the life cycle of plastics. Ensuring protection of human rights and labour conditions in the IWRS. Mitigating externalised costs of pollution.
2 <b>Recognition</b>	Ensuring recognition of the dignity of individuals, as well as their collective identities, livelihoods and needs.	Establishing dignified working and living conditions <sup>64</sup> for IWRS workers and communities, while recognising the skills, knowledge and interests of IWRS individuals and organisations.
3 <b>Procedural justice</b>	Ensuring opportunities for all relevant stakeholders, regardless of demographic background, to participate in decision-making that affects their environments and lives.	Enabling meaningful participation of IWRS workers in decisions that directly affect their livelihoods, through financial support, relevant capacity building and training, and the creation of venues that allow for active engagement across languages and cultures.
4 <b>Capabilities</b>	Developing individuals' capabilities to function fully in the life they choose for themselves, promoting multi-dimensional aspects of wellbeing and the freedom these capabilities entail.	Promoting individual and collective dimensions of wellbeing, including access to health, education, social protection, technology and information. Building on partnerships that respect human rights. Expanding the scope of inclusive decision-making. Identifying immediate and long-term responses to create and expand sustainable freedoms for IWRS workers.

## Human and workers' rights

A recent report on human rights impacts of plastic recycling highlighted the significant threats of plastic waste and recycling to the health and rights of workers and nearby communities<sup>65</sup>. A just transition of the IWRS involves ensuring that strategies to reduce plastic pollution do not conflict with universal principles of human rights and decent work. A human rights-based approach can be understood as ensuring that policies, governance and management approaches do not violate human rights, and that those designing and implementing such policies actively seek ways to support and promote human rights<sup>66</sup>. While human rights are protected in national and international laws,

studies show that these are often breached with regard to workers engaged in the IWRS<sup>67</sup>. At the same time, it must be recognised that both legal and illegal plastic waste exports are contributing to human rights breaches beyond the national jurisdictions<sup>68</sup>. In this regard, it is key to recognise international human rights laws that obligate governments to protect the rights of those within their authority from harm. This includes the protection of rights linked to health, child labour, migrant workers and their families, access to information, business activities and a healthy environment.

### Right to health

The International Covenant on Economic Social and Cultural Rights<sup>69</sup> has specific treaty obligations with regard to improving “all aspects of environmental and industrial hygiene”, for example through the prevention and reduction of the population’s exposure to harmful substances, including chemicals. It recognises everyone’s right to just and favourable working conditions that are safe, healthy and minimise exposure to toxic substances, as far as reasonably practicable<sup>70</sup>. This is significant given the high exposure of IWRS workers to potentially hazardous substances.

### Rights of migrant workers and their families

The International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families<sup>73</sup>, builds on related principles and standards set by the ILO concerning the dignity, equality and rights of migrant workers, focusing on eliminating the exploitation of workers in the migration process. Given the large proportion of migrant workers in the IWRS, it is relevant for a just transition to consider the monitoring mechanisms under this Convention.

### Children’s rights to health and development

The Convention of the Rights of the Child (CRC) underlines children’s rights “to grow and develop their full potential and live in conditions that enable them to attain the highest standard of health,” including the protection from economic exploitation and work that is likely to be harmful to the child’s physical and mental health and development<sup>71</sup>. The ILO Worst Forms of Child Labour Convention (No. 182) also obligates states to protect children from work that is likely to harm the health, safety, and morals of children<sup>72</sup>. Identifying ways to reduce health and development risks on children involved in informal waste and recovery activities is imperative, given the large presence of children working in this sector under precarious and exploitative conditions and without access to education.

### Right to a clean, healthy and sustainable environment

The UN Human Rights Council (2021) and the UN General Assembly (2022) recognised the universal right to a safe, clean, healthy and sustainable environment<sup>74</sup>. In June 2022, a resolution to add “a safe and healthy working environment” to the existing four FPRW<sup>75</sup> was adopted by delegates during the 110th International Labour Conference in Geneva, Switzerland.

## The five Fundamental Principles and Rights at Work, 2022

1. Freedom of association and the effective recognition of the right to collective bargaining
2. The elimination of all forms of forced or compulsory labour
3. The effective abolition of child labour
4. The elimination of discrimination in respect of employment and occupation
5. The right to a safe and healthy working environment

The FPRW are part of the 1998 ILO Declaration<sup>76</sup>, and all ILO Member States commit to respect and promote these principles and rights, whether or not they have ratified the relevant Conventions. Realising a clean, healthy and sustainable environment requires:

1. sustained efforts to keep working environments free from accidents, injuries and diseases,
2. application of a just transition logic that avoids trade-offs between the right to work and the right to a healthy environment, and
3. protection of biodiversity by supporting the livelihoods of indigenous peoples<sup>77</sup>.

## Decent work and the social and solidarity economy

Since 2015, 'decent work' is an integral element of the 2030 Agenda for Sustainable Development, particularly under Goal 8, which calls for sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. Target 8.3 is especially relevant for the transition of the IWRS, aiming to "promote development-oriented policies that support productive activities and decent job creation, and to encourage the formalisation and growth of micro-, small- and medium-sized enterprises, including through access to financial services." The indicator for this target is the "proportion of informal employment in total employment, by sector and sex"<sup>78</sup>. While SDG 8.3 underlines the importance of labour rights for all workers, the focus is largely on gross domestic product and per capita growth, rather than on ensuring social protection. Waste and recovery workers (whether formal or informal) are essential actors in municipal waste management and recovery value chains. In many regions, they are likely to be exposed to hazardous working conditions, societal discrimination, poverty and precarious livelihoods. Principles and targets for a just transition should thus also be pursued in formal waste and recovery contexts, since formal settings are not a prerequisite for safe, healthy and decent working environments<sup>79</sup>. Objectives for a just transition of the IWRS should go beyond formalisation, and include specific targets and indicators related to social protection, work and employment conditions, income stability, and fora for participation and dialogue.

In the area of social justice and labour inclusion for sustainable economic development, the social and solidarity economy (SSE) can be seen as an alternative to generating work and income<sup>80</sup>. The ILO *Resolution concerning decent work and the social and solidarity economy* acknowledges the contribution of the SSE to poverty reduction, inclusive societies, transition from the informal to the formal economy, enabling recovery, and building resilience<sup>81</sup>. It defines the SSE as encompassing enterprises, organisations and other entities that are engaged in economic, social and environmental activities to serve the collective and/or general interest. These are based on the principles of voluntary cooperation and mutual aid, democratic and/or participatory governance, autonomy and independence, and the primacy of people and social purpose over capital in the distribution and use of surpluses and/or profits as well as assets. The SSE builds on values that care for the people and the planet, including equality and fairness, interdependence, self-governance, transparency, accountability, and decent work and livelihoods. These principles and values can be building blocks for achieving a just transition of the IWRS, through the recognition of the role of SSE and the promotion of decent work.

In this regard it is also relevant to consider the following recommendations and guidelines developed by the ILO with relation to a just and sustainable transition from the informal to the formal economy.

## Transitioning from the informal to the formal economy

In 2015, the ILO adopted the *Transition from the Informal to the Formal Economy Recommendation* (R204)<sup>82</sup>.

The aim was to facilitate the transition of workers and economic units from the informal to the formal economy, while respecting workers' fundamental rights and ensuring opportunities for income security, livelihoods and entrepreneurship. It recognises that informality in all its aspects is a major challenge for the rights of workers and is associated with limited social protection and decent working conditions.

R204 covers all economic units that are "in law or in

practice – not covered or insufficiently covered by formal arrangements". It provides guiding principles to formalisation, legal and policy frameworks, employment policies, rights and social protection, incentives, compliance and enforcement. It also addresses freedom of association, social dialogue and the role of employer's and worker's organisations in the formalisation process.

Table 3 outlines some of the R204 principles relevant to the just transition of the IWRS.

**TABLE 3** R204 Principles and the possibilities for a just transition of the IWRS.

R204 Principles	Possibilities for a just transition
Promotion and protection of human rights of all operating in the informal economy	Dignified livelihoods and working conditions, including access to decent housing, clean water, healthy food, free medical care, free education, secure and stable work, and free time <sup>83</sup> .
Promotion of gender equality, non-discrimination, and special attention to those who are especially vulnerable to the most serious work deficits in the informal economy	Gender-responsive, age- and disability inclusive policies, and participation in relevant decision-making processes may promote fairer pay and eliminate broader issues of discrimination, violence and sexual harassment. Existing toolkits developed by WIEGO could be used as a starting point for this process <sup>84</sup> .
Need to preserve and expand on entrepreneurial potential, creativity, dynamisms, skills and innovative capacities of workers and economic units in the informal economy	Recognising these enterprises as valuable actors in the plastic recycling value chain calls for financial support and capacity building measures to allow stakeholders in the IWRS to expand their capacities and invest in more efficient, environmentally sound and safe waste management and recycling infrastructure.

Characteristics, circumstances, and needs of workers and economic units in the informal economy vary across ILO Member States. R204 recommends that authorities should identify the nature and extent of the informal economy and its relationship with the formal economy in cooperation with representatives from membership-based organisations and workers, and economic units in the informal economy. This would facilitate tailored approaches and complimentary strategies that consider specific national circumstances.

**As the nature and extent of the IWRS and its interlinkages with the municipal and private waste management sector is currently poorly understood on a holistic level, a comprehensive effort to gather existing data and compliment it where data is scarce is a prerequisite for a just transition of the IWRS.**

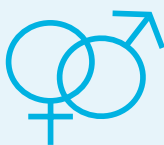
The non-binding ILO *Guidelines for a just transition towards environmentally sustainable economies and societies for all* build on the four pillars of the ILO Decent Work Agenda – employment creation, social protection, rights at work, and social dialogue. The guidelines indicate that transitions to environmentally and socially

sustainable economies can become a strong driver of job creation, job upgrading, social justice and poverty eradication. It recalls the principle of ‘common but differentiated responsibilities’<sup>85</sup> and provides guidance for governments and social partners to design a just transition in line with their specific country conditions.

Importantly, it elaborates on the guiding principles for a just transition:



Social dialogue should be an integral part of policymaking and implementation, with adequate, informed and ongoing consultation with all relevant stakeholders.



Policies must respect, promote and realise FPRW, and consider gender dimensions of environmental challenges and opportunities.



Coherent policies should provide a just transition framework for all, to promote decent jobs, adequate and sustainable social protection, and organisation for collective bargaining.

These principles could also be complemented with the ILO *Social Protection Floors Recommendations*<sup>86</sup>, which provide guidance for the development of social security systems and protection that are accessible to those who are most vulnerable, including workers in the informal economy and their families.



Young man sitting on the beach litter in Ghana [Kirsten Milhahn / UN-Habitat]

## Active stakeholder participation

Opportunities for people and groups in marginalised and vulnerable situations to participate in decision-making processes have historically been non-existent<sup>87</sup> and are a major aspect of environmental injustice. Thus, meaningful and effective stakeholder involvement in intergovernmental environmental negotiations is key to ensuring that no one is left behind<sup>88</sup>. When developing a global instrument on plastic pollution, it is critical to acknowledge the voices and stakeholder interests of those most affected by plastic pollution and those at the forefront of solutions to reduce it. Broad, active and meaningful participation of stakeholders representative of the full lifecycle of plastic, including IWRS workers, marginalised communities and groups particularly vulnerable to the impacts of plastic pollution is needed during the negotiations and in the development and implementation of adequate measures<sup>89</sup>.

The UNEA-5.2 resolution to end plastic pollution explicitly calls for the “widest and most effective participation possible”. While it does not clearly define what participation entails, it reaffirms and recognises the 1992 Rio Declaration and the 2030 Agenda for Sustainable Development. The Rio Declaration places people’s rights at the centre of sustainable development concerns, while the Agenda for Sustainable Development underlines the need to ensure responsive, inclusive, participatory and representative decision-making at all levels. These well-established principles can be seen in relation to a just transition of the IWRS under a global instrument (see Table 4).

**TABLE 4** Transferable concepts of participation and sustainable development for a just transition of the IWRS <sup>90</sup>.

Principles and goals	Transferable concepts of participation and sustainable development for a just transition of the IWRS
Rio Principle 10; SDG 16.7; SDG 5.5	Ensuring representative and equal opportunities for participation of relevant stakeholders in decision-making at all levels.
Rio Principles 20-22; SDG target 5.5;	Recognising the vital role of underrepresented societal groups, including women, youth and indigenous communities in decision-making processes.
SDG 12.8; SDG 16.10	Ensuring public access to relevant information and the protection of fundamental freedoms for all stakeholders.
Rio Principle 13	Developing liability and compensation mechanisms for pollution and environmental damage.
Rio Principle 14	Preventing international trade of substances harmful to human health and the environment.

While each process towards MEAs requires the consideration of different contexts and stakeholder needs, it is useful to assess the strengths and weaknesses of existing MEAs. The Almaty Guidelines<sup>91</sup>(2005) under the Aarhus Convention<sup>92</sup>(2001), and the Escazú Agreement<sup>93</sup>(2021) are perhaps two of the most relevant in this regard, as they strongly advocate for public participation in environmental decision-making processes, access to information and justice in environmental matters. Consequently, Parties to the Aarhus Convention are obliged to take proactive action towards guaranteeing public participation in all global forums related to the

environment in which they participate<sup>94</sup>, including the process for a global instrument on plastic pollution. The Escazú Agreement specifically encourages public authorities to identify and support the participation of vulnerable people and groups in international fora and environmental negotiations. It calls for elimination of participation barriers by making information available and establishing procedures for assistance and support mechanisms, such as free technical and legal assistance, and translation and interpretation wherever necessary<sup>95</sup>. This means that ensuring meaningful and active participation of IWRS stakeholders is guided by existing internationally legally binding instruments. In

addition, it is also useful to assess established platforms for enhanced action of non-state actors towards meeting the climate emission reduction goals set by the Paris Agreement (2015)<sup>96</sup>. For example, the Lima-Paris Action Agenda that resulted from discussions at COP 20 in 2014, recognises the key role of non-state and civil society actors in the transition towards resilient and low carbon economic and social development<sup>97</sup>.

The right of major groups and other stakeholders (MGoS)<sup>98</sup> to participate in negotiations of MEAs, with regard to admission, intervention and publicity, are determined in the Rules of Procedure. Since the UNFCCC, major stakeholder groups, including non-government actors and civil society representatives, have been granted increasing rights to participate as observers in MEA negotiations (e.g., Convention on Biological Diversity). For some MEAs, MGoS can also make statements and contribute to the negotiation process (e.g., Minamata Convention on Mercury, Escazú Agreement). Although the final decisions were made by the governments, during the Aarhus Convention negotiations, civil society organisations were able to present views and proposals on an equal footing with country delegates (as opposed to being observers)<sup>99</sup>.

Participation of MGoS in the forthcoming INCs is regulated by the Draft Rules of Procedure<sup>100</sup> adopted during the OEWG 2022, which state that accredited MGoS can participate as observers in the Plenary, the Committee of the Whole, and the Ministerial

Consultations discussions, and may in some instances, make written and oral statements to items on the agenda (XIII. Rule 70). Civil society organisations must among others, submit a registration certificate including a stamp from the issuing government authority to be accredited by the United Nations Environment Programme (UNEP). This is a barrier for those informal waste worker organisations that are not registered and/or lack support from the local government in the location they operate. To enhance MGoS and civil society participation during the INCs, a forum for MSDs has been established. A strong interaction between the MSD and the INC can facilitate active and meaningful participation of IWRS workers, for example through developing a procedure for the inclusion of key concerns raised by stakeholders during the MSD into the INC. However, many IWRS workers cannot fulfil the travel requirements for physical participation in the INCs (e.g., passports, visas and vaccinations). Barriers to registration and participation of groups in vulnerable situations need to be addressed and accounted for to enhance active and meaningful participation. This could be achieved in two ways: 1) the respective negotiating Member States provide financial support and help with the practicalities, or 2) UNEP collaborates with international IWRS stakeholder associations and groups to provide support, which is financed by Member States that can afford it.



Multi-stakeholder dialogues during the Open-Ended Working Group in Dakar [NIVA / Emmy Nøklebye]



## 3.2

### Drawing on experiences from other MEAs

---

To better understand how mechanisms can contribute to a just transition of the IWRS under a global instrument to reduce plastic pollution, existing MEAs can provide valuable lessons learned on the concepts of informality, hazardous waste and indigenous knowledge. Relevant MEAs include the Minamata Convention on Mercury, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, and the Convention on Biological Diversity.

#### Minamata Convention on Mercury – specifically addressing an informal sector

The Minamata Convention on Mercury<sup>101</sup> (henceforth, the Minamata Convention) (2013) was established to protect human health and the environment from the adverse effects of mercury. To date, it is the only MEA that explicitly addresses an informal sector, in the context of artisanal and small-scale gold mining (ASGM) communities, under Article 7 and Annex C<sup>102</sup>. Like the forthcoming global instrument, the Minamata Convention takes a life cycle approach to protect human health and the environment from the adverse effects of mercury pollution. It is particularly relevant to look at how the Minamata Convention has engaged with ASGM communities when it comes to delineating worst practices, mitigating impacts on marginalised livelihoods and communities dependent on informal activities in the process, and co-developing solutions that utilise existing skills, knowledge and informal recovery structures<sup>103</sup>.

The Minamata Convention specifically and separately addresses the ASGM sector in Article 7, with the aim to reduce, and where feasible, eliminate the use of mercury and mercury compounds in ASGM. This differs from an outright ban on the use of mercury in ASGM, which was considered less effective in transforming the sector, socially and financially burdensome on a group of workers in vulnerable situations, and more likely to lead to increased illegal activity. Furthermore, parties to the Convention are mandated to inform the Secretariat if ASGM using mercury at a more than insignificant level is taking place within their territory and if it is, to subsequently develop and implement a National Action Plan (NAP) aimed at fulfilling obligations set out under article 7. To support the development of NAPs, the Parties adopted a guidance document developed in cooperation with the Global Mercury Partnership.



Annex C of the Convention lists mandatory elements of the NAP, including:

1. enabling recycling,
2. national objectives and reduction targets,
3. actions to eliminate worst practices (those with serious impacts on health and the environment),
4. strategies to prevent the exposure of vulnerable populations,
5. steps to facilitate the formalisation or regulation of the ASGM sector,
6. baseline estimates of the practices employed in ASGM, and
7. strategies for involving stakeholders in the implementation and continuing development of the NAP.

Progress review and monitoring are also key elements of the process, and countries are obliged to submit review reports every three years. So far, 22 Parties have submitted their NAPs<sup>104</sup> and a further 24 have started Global Environment Facility (GEF)-funded NAP projects<sup>105</sup>.

Article 13 of the Minamata Convention sets up a mechanism to support Parties from developing countries and economies in transition in implementing their obligations. The mechanism includes the GEF Trust Fund and PlanetGold, a specific international programme to support capacity building and technical assistance<sup>106</sup>. Article 13 states that GEF shall provide new, predictable, adequate and timely financial resources to meet costs in support of implementing the Convention. In practice, this means for example that GEF provides up to USD 500,000 per eligible Party for the development of NAPs. It also funds projects that contribute to the implementation of NAPs<sup>107</sup> and the transformation of the sector to non-mercury approaches, for example through the PlanetGold. PlanetGold works in partnership with governments, the private sector and ASGM communities in 23 countries to improve production practices and work environments of the communities, thereby supporting the countries' commitment to eliminating mercury from the ASGM supply chain. The programme is hosted by UNEP through the Minamata Convention Secretariat, which established a Specific Trust Fund to support Parties in implementing the Minamata Convention.

Financial and in-kind contributions to the fund are encouraged from a broad range of stakeholders, including governments, intergovernmental organisations, the private sector and civil society. Since the inception of the fund, the main financial contributors have been governments<sup>108</sup>.

A recent report examining human rights violations and environmental injustices related to mercury and ASGM communities<sup>109</sup> highlights some of the gaps and shortcomings of the Minamata Convention, particularly concerning the implementation of NAPs, the promotion of formalisation (which does not automatically lead to improved working conditions), prevailing breaches of human rights (particularly for people and groups in vulnerable situations), and illegal export of mercury waste. This demonstrates the need for close monitoring and evaluation of policies, particularly when it comes to assessing and mitigating their impacts on human and workers' rights. It is also crucial to consider gaps and shortcomings like these when considering lessons learned from other MEAs.

## Convention on Biological Diversity – inclusion and protection of knowledge

The Convention on Biological Diversity (CBD) (1993) aims to conserve biological diversity, to sustainably use its components, and to fairly and equitably share the benefits arising out of the utilisation of genetic resources. The CBD recognises traditional and indigenous knowledge providers as key actors and set up a dedicated working group to establish guidelines accordingly<sup>110</sup>.

Particularly relevant in this regard, are actions and voluntary guidelines developed under the Working Group on Article 8(j) (WG8j) of the Convention, such as a glossary of relevant key terms and concepts<sup>111</sup>. The glossary assists Parties in achieving consensus in decision-making and regional reports, such as the composite report on the status and trends regarding the knowledge, innovations and practices of indigenous and local communities<sup>112</sup>. Voluntary guidelines have also been developed, including assessments of cultural, environmental and social impact from proposed developments that are likely to affect land occupied or used by indigenous and local communities (Akwe: Kon<sup>113</sup>).



Convention on  
Biological Diversity

Codes of ethical conduct provide a collaborative framework to ensure effective participation and equal partnerships, recognising that traditional and indigenous knowledge, innovations and practices provide valuable information to the global community and can be useful for policy development (Tkarihwaí:ri<sup>114</sup>). In addition, a Plan of Action on Customary Sustainable Use of Biological Diversity has been developed to support the just implementation of Article 10(c) at local, national, regional and international levels<sup>115</sup>. The first meeting of the WG8j approved the proposal to have representatives from indigenous groups as co-chairs for sub-working groups dealing with agenda items<sup>116</sup>.

## Basel Convention – guidelines for informal sector activities

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal<sup>117</sup> (henceforth, the Basel Convention) (1989) aims to protect human health and the environment against the adverse effects of hazardous wastes through the reduction of hazardous waste generation, the promotion of its environmentally sound management (ESM), and restriction of transboundary movements of hazardous wastes.



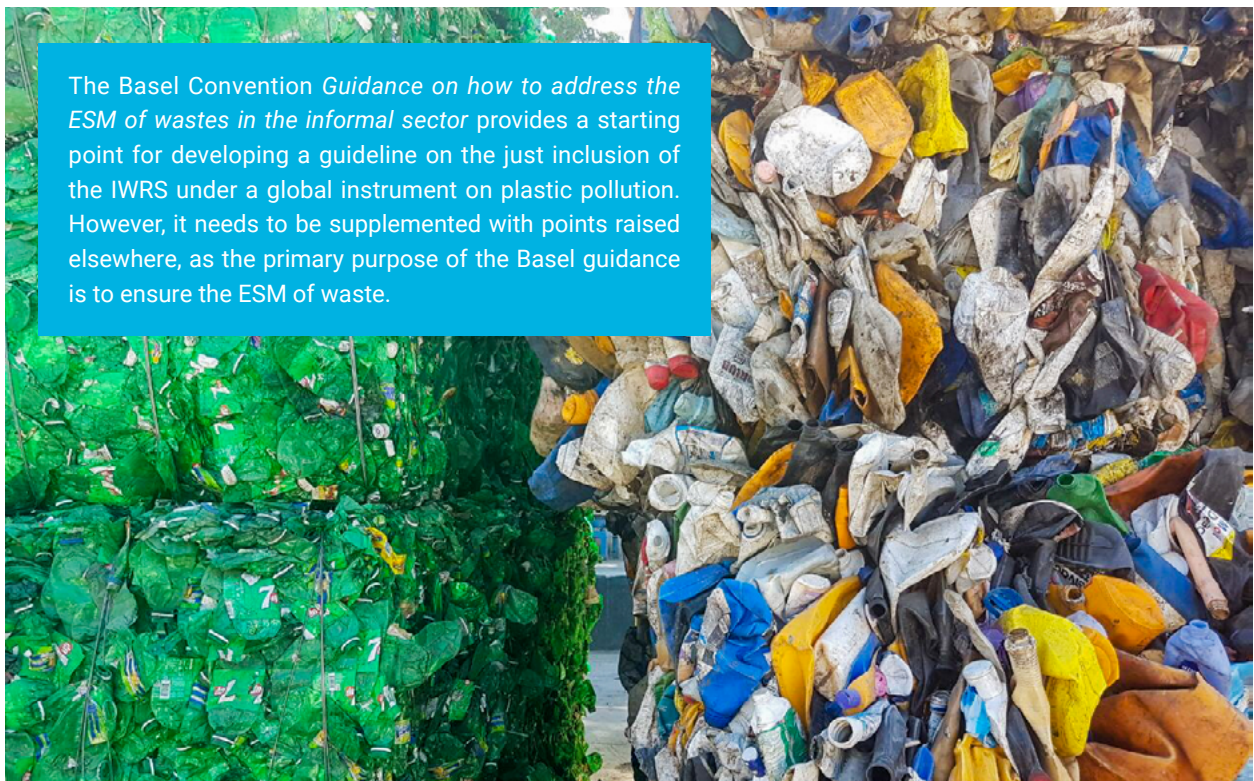
The Expert Working Group on ESM was established in 2013 to support the implementation of ESM. It developed the ESM toolkit<sup>118</sup>, which provides guidance on how to address the ESM of wastes in the informal sector, describes ways to mitigate the potential for adverse environmental impacts (e.g., open burning, illegal dumping of waste) and provides considerations for how the informal sector can be integrated in ESM systems for wastes. It stresses that policies to crackdown or prohibit recycling by the informal sector may do more harm than good by adversely impacting livelihoods and exacerbating working and living conditions of vulnerable populations. It proposes an alternative, more practical and sustainable approach to identifying ways to strengthen the informal sector by incentivising the adoption of ESM work practices in their work. The argument is that these will eventually lead to compliance with relevant policies and regulations. It mentions<sup>119</sup>:

- » Making use of the informal sector (e.g., to expand collection coverage, to reach areas difficult to access, and to tap into its material knowledge) and promoting social practices and employment creation, while reducing occupational and environmental exposure to hazardous and unsafe materials (20a)
- » Providing adequate tools and PPE, and access to adequate workspaces, including proper ventilation, to reduce occupational exposure to hazardous and unsafe materials (20e)
- » Locating processing sites away from water, homes and residential areas to decrease environmental leakages and the potential of exposure of family members and surrounding populations to hazardous contaminants (20g)
- » Prohibiting open burning of wastes (20j)
- » Introducing segregation at source, for example through education programmes for the public, to make collection more effective, reduce environmental leakage, and protect informal waste collectors (20c,20h)
- » Strengthening worker organisation and the technical management capacity of such organisations to contribute to ESM practices, while improving working conditions and power to influence policies that affect livelihoods in the IWRS (20k).

The toolkit also offers perspectives on key considerations for integrating the informal sector. It points out that integration options could be discussed in participatory, government-led stakeholder dialogues, and considered in national and local waste management plans, including in the establishment of producer-led extended producer responsibility (EPR) schemes for specific waste streams (22). Eliminating negative aspects that characterise the informal sector while protecting jobs and stable incomes for stakeholders in the IWRS should be the focus of integration (23). The toolkit further underlines the need to recognise and avoid potential risks with different integration models, such as intensifying vulnerabilities, power imbalances, and diverging interests leading to exploitation and undermining of informal worker cooperatives (25). The following recommendations are relevant to the integration of informal stakeholders in the SWM:

- » Make informal sector integration a national policy (26d)
- » Encourage municipalities to actively pursue local integration (26e)
- » Support the self-organisation of waste pickers and provide relevant capacity building (26f,e)
- » Involve representatives of the informal sector in SWM planning processes (26h)
- » Establish forums for dialogue between all stakeholders involved in SWM (26i)
- » Encourage businesses and industries to invest in the social enterprises of waste plmprove social recognition through public awareness and communication campaigns (26l)
- » Facilitate the organisation and formal recognition of informal waste workers through identity cards, association, cooperatives, enterprises, etc. (26n)
- » Train stakeholders on health, environment, technical and management aspects (26o)

The Basel Convention *Guidance on how to address the ESM of wastes in the informal sector* provides a starting point for developing a guideline on the just inclusion of the IWRS under a global instrument on plastic pollution. However, it needs to be supplemented with points raised elsewhere, as the primary purpose of the Basel guidance is to ensure the ESM of waste.



Recycling Plastics, Haiti [UN-Habitat / Nao Takeuchi]

### 3.3

## Recognition and inclusion of the IWRS

---

Formalisation has commonly been promoted as the way forward in achieving a sustainable and just transition of the informal sector, as prioritised by the ILO *Centenary Declaration for the Future of Work*<sup>120</sup> and SDG 8, which asserts that formalisation will produce economic growth and decent work. The New Urban Agenda<sup>121</sup> promotes a progressive transition to the formal economy that adopts a balanced approach of combining incentives and compliance measures, while emphasising the preservation and improvement of existing livelihoods. This considers specific national circumstances, legislation, policies, practices and priorities<sup>122</sup>. Under such initiatives, formalisation itself is not the end goal, rather the improvements in working and living conditions that formalisation can bring about. It is important to remember that formalisation is approached differently in different socio-political, temporal and geographical contexts, and has varying socio-economic implications for IWRS stakeholders<sup>123</sup>.

Clear definitions and terminology are important, especially in the context of developing a global instrument on plastic pollution, as diversities and nuances exist within the IWRS across the world. In this report, a just transition of the IWRS in the plastic value chain is defined as designing the transition to sustainable production and consumption of plastic in a manner that is as fair and inclusive as possible to the IWRS, generating and preserving decent work opportunities, and leaving no one behind. Inclusion, integration and formalisation are central elements in this process. To create a common understanding of the role these elements play in a just transition, it is necessary to define them further.

In this report, '**inclusion**' refers to the inclusion of voices, interests and knowledge of IWRS stakeholders as a key element of decision-making processes and of the development of policies that reduce pollution, from local to global scales.

'**Integration**' refers to the ways in which IWRS stakeholders may be integrated as active stakeholders in MSWM systems. The integration process can be inclusive but at the same time driven by external interests and unequal power-dynamics, which may prioritise environmental and economic interests over protection of livelihoods and interests of stakeholders. Integration of the IWRS can take different forms: IWRS workers may organise in associations or cooperatives and establish contracts with municipalities, they may form micro- and small enterprises to provide waste services to their communities, or be employed as workers in municipal or private waste management services<sup>124</sup>.

Integration is often used interchangeably with the related term '**formalisation**'. In this report, formalisation is to a larger extent associated with changes in the legal policy landscape to recognise the IWRS and integrate it in law and in practice, as well as the process of extending legislative frameworks to cover labour and social protection for informal sector workers<sup>125</sup>. Integration, formalisation strategies vary, and may include the creation of tax categories for waste pickers and the provision of identity cards to informal waste collectors and waste pickers.



Waste pickers at Dandora dumpsite receive PPE [UN-Habitat]

Top-down integration and formalisation processes developed without the active participation of IWRS stakeholders risk conflicting with their interests and may give rise to adverse socio-economic impacts for IWRS livelihoods. They also often fail to make use of existing skills in sustainable and inclusive waste reduction strategies, established network structures and trade relationships in the IWRS. It must also be recognised that informal stakeholders may wish to remain in the informal sector. For example, some IWRS workers value the autonomy and flexibility of informal employment, some experience a drop in income when entering the formal economy, and some might not meet the requirements often set for formal employment. Similarly, informal recyclers may oppose integration and formalisation because the process is resource and cost intensive, highly regulated, firmly managed and taxed, and may offer limited autonomy and financial incentives.

The following sections highlight key elements of a just transition in practice by examining existing formalisation and integration efforts. To date, these processes have primarily targeted informal waste pickers and waste collectors. Integration has commonly been practiced through formalisation of IWRS stakeholders, IWRS workers organising in cooperatives and associations, or IWRS workers being employed in formal (municipal or private) waste management systems. However, these approaches are often combined and interlinked, and their socio-economic outcomes may differ across contexts. It must be noted that there is no one-size-fits-all solution to a just transition, as circumstances and people involved in the process differ.

## Formalisation under frameworks and policies

To understand how formalisation has been approached in practice, it is helpful to look at countries such as Brazil, Argentina, South Africa and the Philippines, where IWRS stakeholders have been addressed in national policies since the early 2000s.

### In Brazil

---

In Brazil, waste pickers (known as ‘catadores’) have been legally recognised in government policies since 2002, when a waste picker category was created in the country’s classification of occupations. Enabling measures included economic incentives to encourage industries to integrate informal waste pickers in the form of a tax credit that industries received when purchasing recyclable materials directly from waste pickers and cooperatives<sup>126</sup>. The Brazilian National Movement of Waste Pickers has been integral in the process by enabling workers to vocalise their demands and influence policymaking. In 2010, Brazil implemented the National Solid Waste Management Policy, which recognised the role of waste pickers in SWM under its EPR provision and stated that corporations should integrate waste picker cooperatives in their reverse logistics systems as service providers<sup>127</sup>.

### In Argentina

---

In Argentina, Act No 9922 (2002) incorporated IWRS actors into the public urban hygiene service as providers of differentiated collection and repealed an ordinance prohibiting IWRS activities<sup>128</sup>. The Act created a registry of waste pickers and established a system to provide credentials and working uniforms to those enrolled. The Management of Domestic Waste Law recognised informal waste pickers and authorised the use of public resources to provide infrastructure, welfare benefits and personal accident insurance for their work. The city council of Buenos Aires introduced a new law in 2005, titled Integral Management of Solid Urban Waste, which officially recognised the IWRS as a key part of the recycling system. Subsequently, IWRS workers were given PPE and the city council encouraged the formation of IWRS workers cooperatives. The IWRS is now a formal part of the SWM system and has even received support from the municipal workers unions.

### In South Africa

---

In South Africa, the second National Waste Management Strategy<sup>129</sup> “commits the national government to provide guidance to municipalities and industry on measures to improve the working conditions of waste pickers”. Various activities have been carried out by the national government to fulfil this mandate. These include efforts to formalise individual waste pickers through formal employment and the more systemic approach of waste picker integration. In 2021, the national government developed the Waste Pickers Integration Guideline for South Africa, which aims to provide options for how municipalities can integrate waste pickers through separation at source initiatives and prioritises waste picker registration<sup>130</sup>. As South Africa has declared its ambition to implement mandatory EPR, the guideline will be particularly relevant to producer responsibility organisations (PROs) and municipalities in ensuring greater integration of waste pickers in these schemes.

## In the Philippines

---

In the Philippines, the National Solid Waste Management Commission developed the National Framework Plan for the Informal Waste Sector in Solid Waste Management (2009)<sup>131</sup>.

This recognises the informal waste sector as a partner for public and private institutions, organisations and corporations in the promotion and implementation of the 3Rs (reduce, reuse and recycle), with the end goal of alleviating poverty. The plan proposes five methods to integrate the informal waste sector, including:

1. supporting new service roles and niches in separate collection and recycling,
2. assuring access to sorting space at transfer stations and sanitary landfills,
3. supporting better market leverage and/or diversification of livelihood activities through cooperatives and associations,
4. opening channels of communication with formal stakeholders and decision-makers in the planning process, and
5. improving working conditions, through the implementation of environmental and occupational safety practices and systems, and living conditions, through better access to social services.

These examples share the key element of recognising the IWRS stakeholders as important service providers in national laws and regulations. This in turn incentivises the integration of informal actors in formal waste collection and recovery systems. Beyond formal recognition, enabling mechanisms include provision of credentials and uniforms, and the presence of strong unions that represent the interests of IWRS workers in the process. It must also be noted that while regulatory recognition is a key first step, it must be followed by supportive and complimentary measures, including economic incentives, awareness raising, capacity building and training, social protection schemes, and the provision of support to WPOs.

## IWRS workers organising in cooperatives or associations

Informal waste pickers, collectors, traders and recyclers may organise in cooperatives or associations<sup>132</sup>. The aim is to advocate for their rights, recognition, inclusion and integration in formal MSWM systems, including improved working conditions, gender equity and higher income.

Evidence shows that IWRS cooperatives and associations are key to a just transition by contributing to:

- » Upgrading waste recovery activities from open dumpsites to doorsteps or material recovery facilities
- » Setting up contracts with municipalities or private operators
- » Ensuring fairer pay (including basic income or fixed salaries from traders and/or formal operators), better working conditions, and access to recyclables for IWRS workers
- » Ensuring that IWRS workers are included in processes towards environmentally sound waste management, such as the closure of open dumpsites

The degree to which waste pickers have organised varies across countries. The International Alliance of Waste Pickers' database, Waste Pickers Around the World, lists 114 WPOs across Africa, Asia and the Pacific, Europe, North America, and Latin America and the Caribbean that represent waste pickers, informal waste collectors and intermediate traders<sup>133 134</sup>.

While in some regions and countries the organisation of the IWRS is well-established, in others it is relatively weak. In Asia for example, there is limited evidence of WPOs in Myanmar, Nepal, Bhutan, China, Pakistan or Afghanistan. However, the lack of registered WPOs does not mean that the workers have not organised or that IWRS activities are not present in these countries. It must also be noted that not every IWRS worker wants to organise. Many enjoy their autonomy, flexible working arrangements, and want to ensure their independence in the future.



Waste picker organisations meeting in Kibera Dumpsite, 2022. [International Alliance of Waste Pickers]

Colombian waste pickers (known as 'recicladores') organised the first national IWRS cooperative movement in the world. In 1986, the NGO Fundación Social helped 150 displaced families form a cooperative when they were faced with the loss of their livelihoods due to the construction of a new sanitary landfill in the city of Manizales. They started by collecting recyclables with a tricycle, then acquired a warehouse, and eventually signed a contract with the municipality for sweeping and recovery of organic waste<sup>135</sup>. Since then, waste pickers have created national, regional and local cooperatives and associations, which allow them to sell recyclables at higher prices directly to industry.

Today, there is the Bogota Association of Recyclers, for example, which represents 19 cooperatives with 2,111 members<sup>136</sup>. Co-op members report a higher standard of living compared to working individually, as well as improvements in empowerment, self-esteem and self-reliance. *Cooperativa Recuperar*, based in Medellin, was one of the most successful co-ops in Colombia and Latin America<sup>137</sup>. At its peak in 2013, it had 4,000 members,

60% of them women. Members earned 1.5 times the minimum wage and had access to the Colombian public medical system. They received loans from the co-op, scholarships, and life and accident insurance. The co-op signed a contract with the municipality for collection, transport and disposal of the wastes generated in the town<sup>138</sup>. The co-op also operated a material recovery facility, provided cleaning and gardening services, and hired out its members as temporary workers to public and private organisations. However, in 2013, due to new government regulations, it had to become a company and reduce its personnel to 150.

In several cities in Colombia, monthly salaries have been set for organised waste pickers, compensating informal workers for their labour<sup>139</sup>. Promoting basic income or fixed salaries for IWRS workers, particularly as service providers in the lower levels of the recovery value chain, independently of collection rates, is a key step towards a just transition. Supporting the formation of and strengthening IWRS organisations can also contribute to a just transition.

## Employment of IWRS workers in formal waste management systems

As part of the formalisation process, individual IWRS workers or groups may be integrated in formal waste management systems through employment with the municipality or a private company. This approach has often been combined with a policy that bans IWRS activities, or makes drastic infrastructure changes in the MWSM system, such as the opening of a sanitary landfill. For instance, in 2014 in Lagos State, Nigeria, the Lagos Waste Management Authority signed a concession agreement with a private company, West Africa ENRG. Under the agreement, the Lagos State government provided land and enacted a policy that banned the activities of waste pickers in the state capital, Ikeja. In turn, the private company built a material recovery facility on the land provided and employed 300 former waste pickers<sup>140</sup>.

In Warangal in India, the municipal government integrated informal waste collectors as waste collection vehicle drivers, by offering bank loans to purchase a waste collection vehicle from the municipality<sup>141</sup>. The model is often highlighted as a success story, due to the autonomy and income stability achieved for integrated waste collectors and the improved source-segregation at reduced costs for the municipality. However, the sustainability of the model requires close collaboration with the municipality to develop, initiate and monitor the system. It is also significant to note gender imbalances within this model, as integrated private drivers are exclusively men. In another example in India, 2,000 unorganised waste pickers were identified and integrated into the municipal dry waste collection system by issuing identity cards and the right to collect waste from specific areas in Bhopal<sup>142</sup>. By facilitating the work of the waste pickers rather than replacing them with a workforce of new contractors, funds were saved for the municipality and integrated waste pickers were ensured a stable source of income.

However, it should be remembered that the abovementioned approaches do not necessitate safe, healthy and decent working environments. Regardless of approach, inclusion of IWRS workers' interests and voices when planning the integration and formalisation of the IWRS is an essential element of a just transition. This is especially relevant when looking at the closure of open dumpsites, which reflect the complicated situation surrounding MSWM. On the one hand, the dumpsites present health and environmental hazards to workers and nearby communities but on the other, they provide a source of income and place to live for IWRS workers. To avoid the livelihoods of IWRS workers being jeopardised in the process of upgrading or modernising open dumpsites and waste management systems, the process must be inclusive of the interests and rights of the experienced people who work in the IWRS. This could also contribute to creating increasingly effective and environmentally sound waste management solutions that offer safe and decent working conditions.

## 3.4

### Further key considerations

---

This section elaborates on further elements that need to be considered for a just transition of the IWRS in the context of ending plastic pollution. This includes the need for financing, baseline data and monitoring of progress.

## Financing

Financial resources could contribute to a just transition of the IWRS, as well as for people, communities and environments that are disproportionately affected by plastic pollution. Financing also relates to sharing the responsibilities to bear the external cost of production, use and disposal of plastics among all the stakeholders in the plastic lifecycle under the application of the ‘polluter pays’ principle<sup>143</sup>, and the concept of ‘common but differentiated responsibilities’<sup>144</sup>.

Financing can facilitate the establishment of waste management infrastructure, regulatory capacities, and monitoring of waste and pollution, as well as ensuring that the development of these aspects does not conflict with the interests of people and groups in poor and marginalised situations. Financial resources to provide fair wages and promote human and labour rights must be set aside for IWRS workers, to prevent them from being exploited at the lowest level of the recovery value chain<sup>145</sup>. Finances can support occupational health, safety and social protection for informal sector workers, for example by lowering healthcare costs and providing access to PPE, as well as capacity building activities, such as training, and access to infrastructure and technology.

Financing to support a just transition of the IWRS can be secured through different means, at global, national and local levels. While a global financial mechanism would be beneficial, funds enabling a just transition must reach the municipalities that are to implement IWRS integration and plastic pollution reduction measures in practice. Following are examples of financial mechanisms that could be pursued.

A similar mechanism to the [GEF Trust Fund](#) and the [PlanetGold programme](#) could be set up to support capacity building and technical assistance. This would rely on voluntary financial contributions from all Parties

(according to their capabilities), as well as resources from other sources, including the private sector. Considering the variety of stakeholders and actors in the IWRS, it would also be beneficial to explore the application of the GEF Small Grants Programme at a larger scale. The programme provides project grants of up to USD 50,000 directly to local communities including indigenous people, community-based groups and NGOs. Participation in the programme could be extended to IWRS actors.

Human rights and international labour standards clearly state that national governments are responsible for ensuring adequate social protection for their country. However, international organisations play an important role in supporting countries to realise these responsibilities. Beyond influencing national debates on what social protection should look like and who should pay for it, [international financial institutions and funds](#) (i.e., International Monetary Fund and World Bank) could provide support for countries facing challenges in financing the required social protection systems. This could for example be realised by including and specifying elements of a just transition of the IWRS in environmental and social safeguard systems<sup>146</sup> when developing an infrastructure investment to end plastic pollution.

Alternative [financial instruments](#) guided by market dynamics have the potential to increase the value of low-value plastic while improving livelihoods in the IWRS. Examples include green and blue bonds, index insurance, carbon credits and plastic credits. However, concerns persist concerning the beneficiaries of these schemes. In the instance of plastic credits<sup>147</sup>, these relate to the lack of transparency and standardised definitions making it difficult to assess projects’ credibility, and the potential for social and environmental greenwashing<sup>148</sup>. They can also distract the attention from a more robust

system change taking into account the full life cycle of plastics, identified as the primary approach to address the plastic crisis by both scientific publications and global policy approaches. Others are being criticised for failing to adequately address the needs and interests of workers in the IWRS. Some initiatives are gaining momentum, as consumers increasingly demand supply chain transparency, fairer conditions for workers, and mitigation of the impacts of mismanaged plastic waste on land and marine environments. In cases where plastic credits are promoted to increase the value and collection of low-value plastic, it is key that environmental and social safeguard systems are in place to ensure that the rights of the IWRS are protected.

**EPR** is a policy approach by which producers are held financially and/or operationally responsible for targeting low-value plastic packaging waste (which is time- and resource-intensive to collect and recycle). Commonly, these schemes and initiatives place the responsibility for implementation on private companies and industries (i.e., through industry-led PROs<sup>149</sup>).

EPR has emerged as an opportunity to increase recycling rates while promoting the socio-economic interests of stakeholders in the IWRS<sup>150</sup>. However, EPR policies and systems can also threaten IWRS communities if they are not designed and implemented through participatory engagement with relevant IWRS stakeholders<sup>151</sup>. EPR systems that exclude the IWRS may divert valuable materials and livelihood sources away from waste pickers and other IWRS workers, and disrupt well-functioning recovery value chains. Moving towards a mandatory EPR system requires a comprehensive approach that focuses on the system architecture and operationalisation, “considering unambiguous roles and responsibilities, balancing ambitious yet practical targets, and integrating the informal sector”<sup>152</sup>. When existing EPR policies do not reference the IWRS, an environmental and social safeguards assessment may be able to highlight unintended negative impacts to the sector.

A globally coordinated **EPR fee or tax** could be developed to contribute to ending plastic pollution and a portion of the funds could be used for co-developed actions towards a just transition of the IWRS. This is not an entirely new idea, as for example the Centre for International and Environmental Law (CIEL) and the International Pollutants Elimination Network have recently advocated for a coordinated chemical tax or fee on basic chemicals<sup>153</sup>. In line with this reasoning, a coordinated tax on the production of plastic has the

potential to generate sufficient financing for the sound global environmental management of plastic waste. As suggested for the tax proposed on the production of chemical feedstock, the revenue raised by these coordinated taxes could flow into a new or existing fund, from which a predetermined percentage would be allocated to a just transition of the IWRS.

On a national level, governments can encourage the integration of IWRS stakeholders through national EPR legislation and schemes. The SWaCH cooperative in Pune, India<sup>154</sup> provides an example of how EPR systems can enable elements of a just transition when implemented with active stakeholder participation and in close collaboration with WPOs. The SWaCH model for MLP builds on existing informal waste collection systems in the city, in which waste pickers are economically compensated for collected MLP through funds from brand owners working directly with SWaCH. The model has led to the integration of informal waste pickers, raised the income of informal waste collectors and increased recovery rates for MLP.

Another successful example is Brazil’s reverse logistics mandatory packaging EPR. Brazil’s Law No 12305 instituted the *National Solid Waste Management Policy* and embedded the concept of ‘shared responsibility’ for the collection and disposal of solid waste generated by industrial and commercial sectors<sup>155</sup>. The shared responsibility entails an EPR provision, also termed reverse logistic system. It recognises the activities of waste pickers and mandates all companies in the packaging sector, including manufacturers, importers, distributors, retailers and end-user companies, to establish a reverse logistics system to bring all post-consumption packaging back to the production chain. Under the policy, companies install points of voluntary collection and recognise waste pickers cooperatives as service providers.

## Towards a just and inclusive EPR system

As a starting point for mitigating the risks of IWRS exclusion and for promoting opportunities for increasingly inclusive EPR systems, WIEGO and the International Alliance of Waste Pickers have developed a position on what inclusive EPR entails. In summary, the technical brief outlines:

- The occupational expertise of waste pickers, due to their historical contribution to waste management and their significant vulnerability in the context of the dynamic landscape of EPR policy and systems, makes them crucial stakeholders to engage with.
- A review of EPR policies attempting inclusion of waste pickers in places like Brazil, Chile, India and South Africa reveals that inclusive EPR policies and schemes are largely aspirational and fall short of the expectations and demands of the International Alliance of Waste Pickers.
- A combination of legislative, facilitative and governance actions constitute the preconditions for inclusive EPR.
- The fundamental principles of fair EPR entail comprehensive research and mapping of stakeholders, their direct engagement in formulating policy and determining details of implementation, and a commitment by producers to improve packaging and the management of materials.
- Inclusive EPR needs to be mandatory and government led, ensure integration of the informal sector, ascribe comprehensive financial responsibility and risk protection squarely on producers, be transparent with robust oversight mechanisms, proffer clear communication and training on EPR systems, and engage waste pickers as equal partners giving them due credit.
- A just transition underscores the recognition, participation and contribution of waste pickers in both the design and implementation of alternative paradigms of material handling.

In their technical brief, the International Alliance of Waste Pickers states that “an inclusive EPR system is one that recognizes waste pickers and the other actors in the informal recycling value chain as partners and legitimate actors in its design and implementation; respects traditional knowledge, innovation and skills; creates opportunities to sustain and improve existing systems and actors; and upholds dignity and creates pathways that institutionalize decent work conditions and opportunities for advancement of historically marginalized actors.”

So far, evidence shows that ‘successful’ EPR systems have mostly piggybacked on existing inclusive systems instead of supporting or initiating inclusion of the IWRS, and have in some instances, led to the exclusion of the IWRS. This is mostly the case when EPR systems are implemented by manufacturing companies setting up their own collection systems with the provision of incentives to households. In this model, the waste pickers are cut off from the recyclable supply as the manufacturing companies usually partner with formal recycling actors to provide coordination and processing of the recovered plastics and other recyclables. For instance, in 2004, the Bulgarian government implemented an EPR system for packaging waste that did not consider the IWRS stakeholder who had been managing recyclable waste recovery. As a result, the new formal sector and old informal sector became engaged in competition that destroyed infrastructure and placed livelihoods at risk. Following this, policy analysts recognised the need to integrate the perspective of IWRS stakeholders into EPR plans to reach a sustainable and inclusive solution<sup>156</sup>.

IWRS stakeholders also often suffer as a result of the commodity market for recyclables, which has been let down by conventional economics. Challenges include the fluctuating price of crude oil, recycling import bans, and a lack of efficient logistical capacities to trade

recyclables. These substantially impact IWRS activities. The barriers are even greater in landlocked and island states that lack speedy access to deep-berth ports or efficient haulage networks, and who often pay more for essential utilities, such as electricity and water. Moreover, they do not benefit from the public subsidies that support recycling markets in Europe and North America. However, legislative shifts and private sector commitments have had a notable impact on commodity markets. For example, the EU’s Directive on Single-Use Plastics and the UK’s Plastic Packaging Tax prescribe a certain post-consumer plastic content in products, and PepsiCo and Britvic have promised to eliminate all virgin plastic use in bottles sold in Europe by the end of 2022. Post-consumer recycled plastic prices, such as for recycled PET, have skyrocketed worldwide by up to 103% since 2021<sup>157</sup>. This is even the case in landlocked states and smaller economies, where conventional PET recycling was not feasible due to a lack of foundational recycling infrastructure and the high cost of transport. The surge of interest in post-consumer plastic will also require manufacturers to work together with the IWRS. While the purchase and processing of virgin feedstocks could traditionally be sourced from a small handful of multi-national corporate petrochemical companies, meeting quota requirements in Europe will be inherently labour-intensive, relying on global IWRS activities to retrieve post-consumer plastics from tens of thousands of locations.

Finally, financing for a just transition of the IWRS to end plastic pollution can also come from within MSWM systems. There are a wide range of instruments available to local governments, including:

- » A specific SWM levy, collected separately or via other utility bills
- » A charge, tariff or fee for waste collection, either as a fixed amount or based on the waste collected
- » Indirect financing through other municipal revenues, such as property taxes
- » Fees to tip waste at disposal sites

By working together with IWRS stakeholders, synergies between improving working conditions and saving costs can also be leveraged. The advantages and associated costs and savings of integrating the IWRS could be assessed in a socio-economic study. Beyond the abovementioned possibilities for financing a just transition, other financial means (both existing and new)

could also be considered to support the interlinked objectives of reducing plastic pollution and protecting livelihoods. Regardless of approach, it is key that human and workers’ rights are at the core of the objectives, and that representatives from the IWRS need to be involved in their development, implementation and assessment.

## Need for monitoring countries' progress on just transition

For a global instrument on plastic pollution to be successful in addressing and advancing the just transition of the IWRS, it needs to make provisions to track progress in a standardised manner following pre-defined indicators, definitions and methodologies. Progress can only be measured if the starting point has been identified. Therefore, an initial baseline study to assess and document current conditions needs to be conducted so that it can be used as a reference point for progress made. UN-Habitat's WaCT<sup>158</sup> could be used by local governments to establish a baseline and monitor progress in their MSWM systems. Relevant indicators that the WaCT is currently assessing include the number

of waste pickers working in disposal facilities, level of operational control in recovery and disposal facilities, and share of informality in the recovery value chain at city level.

The WaCT could easily be modified to incorporate additional survey steps to profile IWRS workers with key indicators related to ILO's Decent Work Agenda. Collected data in selected cities could be extrapolated to produce a national estimate and be used to inform countries' NAPs to identify concrete actions in addressing plastic pollution.

Indicators for monitoring and reporting countries' progress towards a just transition of the IWRS could be based on the following:

- » Availability of waste management strategies or policies that address formalisation and integration of the IWRS. Parties should not only be assessed by the availability of such strategies or policies but also by the level of enforcement to ensure policy implementation. As highlighted in the examples from Brazil and Argentina, the just transition of the IWRS becomes systemic when the government implements and enforces policies that explicitly recognise the activities of the IWRS and make provisions for their inclusion in the formal waste management system. Hence, this forms a key just transition indicator, as it demonstrates willingness to stimulate the inclusion, integration and formalisation of the IWRS.
- » Availability of specialised institutions for IWRS formalisation. Following the example of South Africa, where the government has established an ad hoc committee for the registration and integration of waste pickers, Parties should create national institutions to support the transition of the IWRS.
- » Proportion of waste and recovery workers with decent work. A survey could be conducted to determine the total number of waste and recovery workers (both formal and informal), as well as the number of these workers with decent work, as defined by the ILO. Data gathered through the baseline study could flow into the creation of a database on the IWRS, together with the following indicator.
- » Share of informality in the recovery value chain. Here, the extent to which the IWRS supplies the formal recovery industry with recyclables and is already part of the WaCT assessment (SDG Indicator 11.6.1) process is measured.
- » SDG Indicators 8.3.1 (proportion of informal employment in total employment, by sector and gender), 8.5.1 (average hourly earnings of employees, by gender, age, occupation and disability status) and 8.7.1 (proportion and number of children aged 5-17 years engaged in child labour, by gender and age) disaggregated to reflect IWRS workers. This requires clarification of the methodologies to obtain or estimate sector-based data, especially for SDG Indicators 8.5.1 and 8.7.1

A significant challenge to gathering data on the IWRS in general is a resistance of IWRS workers to take part in surveys and studies run by public or non-governmental initiatives. This is due to apprehension or fear of being penalised for *'illegal'* activities and is linked to the criminalisation and marginalisation of these workers. This was the case when applying the WaCT in some cities and could explain why no intermediate traders responded to the survey conducted for this report. To overcome these barriers, it is essential that IWRS activities are not criminalised and that inclusive policies are supported by awareness raising, capacity building and trust building measures. In this way, it will be possible to accurately map and identify individuals, networks, challenges and opportunities towards a just transition of the IWRS.

For countries to set a baseline and monitor the progress on a just transition of the IWRS, clear guidance and standardised methodology should be developed and made available. The monitoring methodology needs to address different capacities of countries, providing both a less-resource intensive methodology that produces an estimate using secondary data, and a comprehensive methodology with primary data collection. Modifying the WaCT to collect data on IWRS workers is a feasible option, as the WaCT is a globally standardised

methodology for measuring SDG Indicator 11.6.1. Linkages and synergies between SDG Indicator 11.6.1 data collection methodologies and its contribution to SDG Indicator 8.3.1, 8.5.1 and 8.7.1 should be clarified, so that more holistic country profiles of the IWRS can be obtained. This approach would also contribute to the overall SDG framework and fill existing data gaps in the waste management sector in general. In addition, it would enable national and local governments to identify necessary policy interventions and infrastructure development areas to improve the overall performance of their MSWM systems.

Baseline data collection exercises such as these are not only useful to monitor progress but can also support signatories of the forthcoming global instrument in their deliberations to become Parties and with implementation. For example, well before the entry into force, any eligible country signatory to the Minamata Convention could apply for USD 250,000 from GEF for initial assessments and ASGM NAPs. Supporting countries in these enabling activities could offer a broader point of entry to ratify the forthcoming instrument, providing support in developing feasible NAPs (if mandated), and emphasising the need to include elements of a just transition of the IWRS.



Informal plastic waste  
segregation yard,  
Delhi, India, 2022  
[NIVA / Emmy Nøklebye]

# 4.

## Conclusions

---

To leave no one behind in the process towards ending plastic pollution, recognition and inclusion of all stakeholders across the plastic recovery value chain is needed. Key considerations to pave the way for a just transition of the IWRS include:

- Applying interlinked elements of environmental justice, such as mitigating unequally distributed impacts of pollution, protecting livelihoods and dignified occupations, promoting individual and collective wellbeing, and minimising barriers to ensure meaningful and active participation.
- Promoting ILO's five FPRW and following available guidance provided by ILO on transitioning from the informal to the formal economy.
- Expanding access to comprehensive and sustainable social protection for all, including nationally defined social protection floors for income security, essential healthcare, and the right to attain the highest level of physical and mental health.

In the survey conducted as part of this report, local government representatives were asked to provide their opinion on how a global instrument on plastic pollution could recognise waste pickers. Around 80% of respondents indicated that the following aspects were important:

- **Setting clear targets for integrating waste pickers in MSWM (e.g., specifying the number of informal IWRS workers to be integrated into the formal waste sector)**
- **Providing financial support for waste pickers to actively engage in the negotiations**
- **Recognising the role of waste pickers in the text of the instrument**
- **Developing guidelines on how governments can include waste pickers to reach the aims of the instrument**

From their responses, it appears that local government representatives realise that plastic pollution can only be addressed through a joint effort.

The following possibilities to promote a just transition of the IWRS have been identified in relation to the negotiation and implementation of a global instrument on plastic pollution based on the findings of this report.

## 4.1

### Possibilities for inclusive and just negotiations to end plastic pollution

---

Active and meaningful participation of the IWRS in the negotiation process is key, but other stakeholders from the plastic recovery value chain, such as local governments and the private sector, also need to be included. Sustainable approaches that work in practice can only be identified if those who are

likely to be affected by the relevant decisions can contribute as active participants in the negotiation and decision-making process, presenting their thoughts, knowledge and expectations themselves or through a representative.

For the IWRS under a global instrument, this means specifically that:

#### The INC could:

---

- Assess the potential social and economic impacts of proposed control measures on livelihoods in the IWRS, throughout the negotiations and most importantly prior to adoption of the text, to avoid unforeseen effects and social disadvantages for the IWRS.
- Establish a dedicated fund to facilitate the participation of IWRS actors, covering costs related to travel (e.g., visas, flights and accommodation), translation and interpretation as well as capacity building and training, so that IWRS actors can contribute their knowledge to the negotiation process.
- Ensure that MGoS have access to information about the opportunity to make written and oral statements related to relevant items on the agenda, as stipulated by the Draft Rules of Procedures adopted during the Open-Ended Working Group in Dakar, 2022.
- Ensure a strong interaction between the MSD and the INC by developing a procedure for the inclusion of key concerns raised by stakeholders during the MSD into the INC.

#### Country delegations could:

---

- Consult with IWRS stakeholders within their own jurisdiction on a frequent basis throughout the negotiations.
- Consider having representatives from the IWRS in their delegation, and facilitate and finance their participation.
- Ensure that key information from the negotiations is regularly communicated back to IWRS stakeholders and representatives within their jurisdiction.
- Seek opportunities to raise awareness on the importance of including the IWRS in efforts to reduce plastic pollution.

## 4.2

### Possibilities for addressing the informal waste and recovery sector in a global instrument

---

To enable a just transition of all actors involved in the plastic recovery value chain, including waste pickers, informal waste collectors, intermediate traders, apex traders and others, a global instrument on plastic pollution could holistically recognise their contribution by:

- **Addressing the IWRS specifically and separately in a global instrument, e.g., through a specific provision or article.**
- **Considering the development of NAPs by all Parties that particularly target the just transition of the IWRS.**
  - » Although each country's NAP process would be unique, an annex to a global instrument could provide a list of mandatory elements. These elements could include targets and actions for the formalisation and integration of the IWRS.
  - » NAPs could include a baseline assessment of the extent of the IWRS, its activities and interlinkages with the formal sector within each country's jurisdiction, and propose short-, medium- and long-term measures to facilitate a just transition.
  - » Guidelines and toolkits could be developed to support Parties with their baseline assessment and NAPs, providing information on methodologies and measures to integrate the IWRS and ensure participation and development of equal partnerships. They could build upon the Basel Convention's guidance on how to address the ESM of wastes in the informal sector, complemented with other aspects (e.g., human and workers' rights) and case studies on formalisation and integration of the IWRS.
- **Establishing a working group dedicated to a just transition of the IWRS.**
  - » IWRS and local government representatives could be core members and could be nominated as co-chairs of meetings.
  - » The group could develop regional status reports that include data about stakeholders, trade relationships, and socio-economic and cultural considerations, requiring data collection on these issues.
  - » Conditions and methodology for national and local level baseline assessments and reporting intervals could be co-developed and agreed on within the working group.
- **Delineating the worst practices, such as child labour in IWRS, open burning of wastes and lack of PPE for workers, as well as identifying ways to strengthen the IWRS by adopting ESM practices for waste.**

- ▶ Not banning IWRS activities, as this may adversely impact livelihoods, exacerbate working and living conditions for vulnerable populations, and result in less-functioning waste and recovery systems.
- ▶ Providing Parties from developing countries and economies in transition with support in implementing their obligations, including capacity building and financial resources to conduct baseline assessments and develop and implement NAPs. Possibilities to secure financial support could include a GEF Trust Fund and a globally coordinated EPR fee or tax.
- ▶ Including a glossary of key terms and concepts relevant to the just transition of the IWRS. The glossary proposed in this report has been developed through close interaction with stakeholders in the IWRS and could provide a starting point for developing universal terminology that broadens common understanding of the IWRS and interconnected concepts.
- ▶ Requiring a standardised method of monitoring progress towards a just transition of the IWRS that is based on pre-defined indicators, definitions and methodologies.



## 4.3

### Possibilities for implementing a global instrument at national and local level

---

Already at the time of negotiation, stakeholders should be considering methods of implementation and beginning processes towards the inclusion of IWRS actors. General considerations for national and local governments include:

- **Setting targets and indicators related to social protection, decent work and employment conditions, and income stability.**
- **Ensuring inclusion of the IWRS by actively involving IWRS representatives in the transition process, for example as part of multi-stakeholder committees and policy dialogues. Involving IWRS representatives in the development, implementation and monitoring of co-defined outcomes will avoid giving rise to adverse socio-economic implications.**
  - » Recognising the IWRS as a knowledge provider on innovation and practices that can feed into policy processes.
  - » Facilitating active and meaningful participation and equal representation of all stakeholders across the plastic life cycle in decisions that directly affect their livelihoods. For example, when planning to close open dumpsites, the provision of financial support and venues that allow for active engagement across languages and cultures (e.g., through technical and legal assistance, and translation and interpretation) should be ensured.
  - » Discussing integration of the IWRS in participatory, government-led stakeholder dialogues focusing on protecting jobs and stable incomes.
- **Recognising and including the IWRS in national and local policies aimed at improving waste management and reducing plastic pollution, such as solid and plastic waste management strategies and EPR schemes.**
- **Providing capacity building activities and skills development for the IWRS to enable the formation of IWRS worker organisations or microenterprises, environmentally and socially sound waste management practices, and transitions to alternative livelihoods. These measures should reflect the individuals' choices to remain in or transition from the waste and recovery sector.**
- **Using national governments to support local governments in implementing national policies and pursuing local approaches to integrate the IWRS.**
- **Considering all available financing possibilities**
- **Developing national EPR systems with the active participation of IWRS workers and building on existing informal waste collection and recovery infrastructure (as outlined in the technical brief by WIEGO and the International Alliance of Waste Pickers).**

This report provides an overview on the importance of the IWRS for ending plastic pollution. It outlines how the current negotiations towards a global instrument to end plastic pollution can leverage a just transition of the IWRS. It calls for the just transition of the IWRS to be fair, inclusive and equitable, generating and preserving decent work opportunities in a way that leaves no one behind. This involves enabling IWRS workers to pursue their livelihoods in a dignified manner, by their choice either inside or outside of the sector, and involving stakeholders impacted by the transition in the development and implementation process. Key elements of a just transition of the IWRS include official and legislative recognition, protection of human and labour rights, access to social services and health schemes, and fair payment for work for all IWRS stakeholders. These are key considerations to bring to the first meeting of the INC but are also basic elements of promoting a just transition in local and national policies that aim to formalise and integrate informal waste and recovery workers as part of strategies to end plastic pollution.

# References

- 1 This definition differs from the definition of the International Alliance of Waste Pickers to highlight the different roles and characteristics of IWRS actors.
- 2 According to a study conducted by UN-Habitat and the University of Leeds in 2022 using the Spatio-temporal Quantification of Plastic Pollution Origins and Transportation (SPOT) model with recently collected Waste Wise Cities Tool data inputs.
- 3 United Nations (2017). *A/RES/71/256\* New Urban Agenda*. United Nations publication.
- 4 United Nations, Environment Assembly (2022). Proceedings, Report, Ministerial Declaration, Resolutions and Decisions UNEA 5.2. 28 February - 2 March. UNEP/EA.5/28
- 5 The 2030 Agenda for Sustainable Development: A plan of action for people, planet and prosperity, seeking to strengthen universal peace in larger freedom for all citizens and recognising that ending extreme poverty and promoting global social justice, equality and inclusion with a commitment to leaving no one behind is a key element in achieving sustainable development.
- 6 The Closing the Loop project aims to make the use and management of plastic more circular, to increase the recovery rate and reduce the leakage of plastics into the marine environment, supporting the implementation of Sustainable Development Goals 11, 12 and 14.
- 7 Network structure refers to the roles of different actors and their interlinkages in the recovery value chain network, while functioning implies the mechanistic relations determining the transition of value (e.g., materials, money) across the elements of the network structure.
- 8 i.e., reducing leakages across the interlinked stages of a product system, from raw material acquisition or generation from natural resources to final disposal (ISO:14040:2006, s.3.1).
- 9 UNEP (2022). Priorities, needs, challenges and barriers relating to ending plastic pollution at the national level. Available at <https://wedocs.unep.org/bitstream/handle/20.500.11822/40721/K2221859%20-%20UNEP-PP-INC.1-11%20-%20ADVANCE.pdf>. Accessed on 6 October 2022.
- 10 UNEP (2015). Global Waste Management Outlook. Available at <https://www.unep.org/resources/report/global-waste-management-outlook>. Accessed on 8 October 2022.
- 11 Lau, W., Shiran, Y., and others (2020). Evaluating Scenarios toward Zero Plastic Pollution. *Science*, Vol 369, Issue 6510, pp. 1455-1461.
- 12 Owens, K.A., Conlon, K., (2021). Mopping Up or Turning Off the Tap? Environmental Injustice and the Ethics of Plastic Pollution. *Frontiers in Marine Science*.
- 13 Dauvergne, P. (2018). Why is the global governance of plastic failing the oceans? *Global Environmental Change*, Volume 51, pp 22-31.
- 14 Persson, L., Bethanie, M., and others (2022). Outside the Safe Operating Space of the Planetary Boundary for Novel Entities. *Environmental Science and Technology*, Vol. 56, No. 3, pp 1510–1521.
- 15 Plastic emissions are plastic that has escaped from the waste management system into the environment and is under no form of control
- 16 UN-Habitat, United Nations Statistics Division, and others (2022). The Sustainable Development Goals Extended Report 2022. Available at [https://unstats.un.org/sdgs/report/2022/extended-report/Extended-Report\\_Goal-11.pdf](https://unstats.un.org/sdgs/report/2022/extended-report/Extended-Report_Goal-11.pdf). Accessed on 14 November 2022.
- 17 Debris is macroplastic that is emitted into the environment, excluding plastic that is openly burnt.
- 18 Open burning means plastic burnt with little to no control (as opposed to more controlled methods such as incineration).

- 19 UNEP (2021). From Pollution to Solution: A Global Assessment of Marine Litter and Plastic Pollution. Available at: <https://www.unep.org/resources/pollution-solution-global-assessment-marine-litter-and-plastic-pollution>. Accessed on 10 October 2022.
- 20 United Nations, Human Rights Council (2020). Report of the Special Rapporteur on the Implications for Human Rights of the Environmentally Sound Management and Disposal of Hazardous Substances and Wastes, Tuncak, Baskut. 5 August. A/75/290.
- 21 Access to basic waste collection service is defined in United Nations Human Settlements Programme (n.a.) *Waste Wise Cities Tool*. p. 11.
- 22 As many cities imposed lockdown measures across the world, IWRS workers were prevented from operating as usual, because they were not recognised as essential service providers. At the same time, workers in the IWRS were often cut off from COVID-19 government support schemes and did not have access to health care since they were not registered as citizens or residents in their place of work.
- 23 Sinha, S., Bharat, K. B., and others (2020). Pilot Study for Plastic and Biomedical Waste Management during the COVID-19 Pandemic in Surat and Delhi. *India-Norway Cooperation Project on Capacity Building for Reducing Plastic and Chemical Pollution in India*. INOPOL project.
- 24 ILO (2018). *Women and Men in the Informal Economy: A Statistical Picture*. Third edition, International Labour Office – Geneva.
- 25 This estimate is commonly quoted in high-level publications, including *World Bank (2021) What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050* and UN Environment (2019) *Global Environment Outlook – GEO-6: Healthy Planet, Healthy People*. The figure can be traced back to *World Bank (2008) The informal recycling sector in developing countries: Organizing waste pickers to enhance their impact* and is based on an estimate of 1% of the urban population in developing countries engaging in waste picking as their primary livelihood. It is unlikely that this estimate is representative of current livelihoods in informal waste and recovery activities, considering population growth, urbanisation and increasing inequalities since then. Furthermore, informal sector livelihoods beyond waste pickers are not accounted for.
- 26 Lau, W. W. Y., Shiran, Y., and others (2020). Evaluating Scenarios toward Zero Plastic Pollution. *Science*, Vol 369, Issue 6510, pp. 1455-1461.
- 27 Segregation is typically done by hand. Workers use their visual, tactile and olfactory experience to identify the type and material composition of the plastics. Some IWRS workers can identify up to 100 different categories of plastic waste.
- 28 The figures and images are used for illustrative purposes only and do not represent the diversity of actors in the IWRS. While the degree of formality often increases at the higher levels of the recovery value chain, the divide between formality and informality remains blurred, with for example, registered recycling units employing informal day labourers.
- 29 Wilson, D. C., Velis, C. and Cheeseman, C. (2006). Role of informal sector recycling in waste management in developing countries. *z*, Volume 30, Issue 4, pp. 797-808.
- 30 Chandran, P., Arora, K., and others (2018). *Valuing Urban Waste: The Need for Comprehensive Material Recovery and Recycling Policy*. June. Hasiru Dala, Bengaluru, India.  
Gill, K. (2010). *Of Poverty and Plastic: Scavenging and Scrap Trading Entrepreneurs in India's Urban Informal Economy*. Oxford: Oxford University Press.
- 31 Velis C.A. and Cook E. (2021). Mismanagement of Plastic Waste through Open Burning with Emphasis on the Global South: A Systematic Review of Risks to Occupational and Public Health. *Environmental Science & Technology*. Vol 55, Issue 11, pp. 7186 – 7207.
- 32 Van Niekerk, S. and Wegmann, V. (2018). *Municipal Solid Waste Management Services in Africa and Arab Countries*. Public Services International.
- 33 Ibid.
- 34 Ibid.

- 35 Ibid.
- 36 Shanker, R., Khan, D., and others (2022). Plastic Waste Recycling: Existing Indian Scenario and Future Opportunities. *International Journal of Environmental Science and Technology*.
- 37 Nick Parkin (2018). Catadores: The Unsung Street Heroes challenging Brazil's Social Structures through New Waste App. Available at <https://www.abc.net.au/news/2018-06-30/brazil-catadores-striving-to-climb-the-social-ladder/9919082>. Accessed on 15 October 2022.
- 38 Green Partners Ltd. (2019). Reducing Greenhouse Gas Emissions through Inclusive Recycling. Available at <https://www.wiego.org/sites/default/files/resources/file/GHG-methodology-WIEGO.pdf>. Accessed on 16 October 2022.
- 39 WIEGO (2021). Reducing Greenhouse Gas Emissions through Inclusive Recycling: Methodology & Calculator Tool. Available at <https://www.wiego.org/ghg>. Accessed on 16 October 2022.
- 40 WIEGO (2021). New Calculator reveals the Amount of Equivalent CO2 mitigated by Waste Picker Activity. Available at <https://www.wiego.org/resources/new-calculator-reveals-amount-equivalent-co2-mitigated-waste-picker-activity>. Accessed on 16 October 2022.
- 41 Kaza, S., Yao, L. C., and others (2018). What a Waste 2.0. - A Global Snapshot of Solid Waste Management to 2050. *Urban Development*, Washington, DC: World Bank.
- 42 Kim Harrisberg (2019). Living off trash: South Africa's waste pickers reclaim the streets. *Reuters*, 30 May.
- 43 Van Niekerk, S. and Wegmann, V. (2018). *Municipal Solid Waste Management Services in Africa and Arab Countries*. Public Services International.
- 44 Velis, C., Powrie, W., and others (2021). Open Uncontrolled Burning of Solid Waste Undermines Human Health: Time to Act. *Waste Management & Research: The Journal for a Sustainable Circular Economy*, Vol 30, Issue 1, pp. 1-2.
- 45 McLean, M. (2000). Informal Collection: A Matter of Survival Amongst the Urban Vulnerable. *Africanus*, Vol 30, No. 2, pp. 8-26.
- 46 Schenck, R. and Blaauw, P. F. (2011). The Work and Lives of Street Waste Pickers in Pretoria—A Case Study of Recycling in South Africa's Urban Informal Economy. *Urban Forum*, Vol 22, pp. 411 - 430.
- 47 Bonner, C. and Spooner, D. (2012). *The Only School we Have. Learning from Organizing Experiences Across the Informal Economy*. WIEGO.
- 48 Krishnan, S. and Backer, A. (2019). *The Role of Gender in Waste Management: Gender Perspectives on Waste in India, Indonesia, the Philippines and Vietnam*. GA Circular, Singapore.
- 49 Mkhize, S., Dube, G. and Quazi, T. (2014). *Informal Economy Monitoring Study: Waste Pickers in Durban, South Africa*. Manchester, UK: WIEGO.
- 50 Mehra, R., Nghia, N. X., and others (1996). Women in Waste Collection and Recycling in Hochiminh City. *Population and Environment*, Vol 18, No. 2, pp. 187-199.
- 51 Palfreman, J. and Theron, J. (2015). *The Potential for Decent Work in Waste Management and Recycling* (United Republic of Tanzania), Labour and Enterprise Policy Research Group, Tanzania.
- 52 Kaza, S. and Yao, L. (2018). *Landslides, Dumpsites, and Waste Pickers*. World Bank Blog.
- 53 Van Niekerk, S. and Wegmann, V. (2018). *Municipal Solid Waste Management Services in Africa and Arab Countries*. Public Services International.
- 54 United Nations, Human Rights Council (2020). Report of the Special Rapporteur on the Implications for Human Rights of the Environmentally Sound Management and Disposal of Hazardous Substances and Wastes, Tuncak, Baskut. 5 August. A/75/290.
- 55 Kaza, S. and Yao, L. (2018). *Landslides, Dumpsites, and Waste Pickers*. World Bank Blog.

- 56 Greg Odogwu (2021). Ogun State's Unwanted Waste Collectors. *Punch Nigeria*, 7 January.
- 57 NAN (2022). LAWMA destroys 400 Carts, says cart pushing Outlawed in Lagos. *The Guardian*, 23 May.
- 58 Lethbridge, J. (2017). *Municipal Solid Waste Management Services in Latin America*. Public Services International.
- 59 Bullard, R.D (2005) *The Quest for Environmental Justice: Human Rights and the Politics of Pollution*. Counterpoint, Berkley.
- 60 Menton, M., Larrea, C., and others (2020). Environmental Justice and the SDGs: from Synergies to Gaps and Contradictions. *Sustainability Science*, Vol 15, pp. 1621-1636.
- 61 Ibid.
- 62 We recognise broader critical discussions related to unequal power structures, colonial knowledge systems and embedded social inequalities in environmental decision-making, and the relevance of these concepts to the desired system change approach under a global instrument. However, in the interest of proposing realistic and tangible steps towards a just transition in the immediate future, we do not analyse these discourses here.
- 63 Based on identified individual and collective dimensions of wellbeing and interlinkages between social, health and environmental interventions presented in United Nations Research Institute for Social Development (2021). *Human Well-Being and Capabilities*. Consultation Document.
- 64 In line with human and workers' rights, including the International Labour Organisation (ILO) Decent Work Agenda and five Fundamental Principles and Rights at Work (FPRW), which will be elaborated on in the following sections.
- 65 Human Rights Watch (2022). *"It's as If They are Poisoning Us" The Health Impacts of Plastic Recycling in Turkey*.
- 66 Human Rights in Biodiversity Working Group: Paper 3 (2021). Implementing a Human Rights-based Approach. Available at <https://www.forestpeoples.org/sites/default/files/documents/HumanRights-based-approach-Mar22.pdf>. Accessed on 13 October 2022.
- 67 Maldonado, A.R. (2020). *La situación de los derechos humanos de las personas recicladoras en América Latina: una mirada desde estándares internacionales*. Women in Informal Employment: Globalizing and Organizing.
- 68 Environmental Investigation Agency (2021). *Ocean: The Truth Behind Trash - The Scale and Impact of International Trade in Plastic Waste*.
- 69 International Covenant on Economic Social and Cultural Rights (ICESCR). Adopted December 16. G.A. Res. 2200A (XXI), 21 U.N. GAOR Supp. (No. 16) at 49, U.N. Doc. A/6316 (1966), 993 U.N.T.S. 3, entered into force January 3, 1976.
- 70 ICESCR, General Comment No. 14, para. 15.
- 71 Convention on the Rights of the Child (CRC), adopted November 20, 1989, G.A. Res. 44/25, annex, 44 U.N. GAOR Supp. (No. 49) at 167, U.N. Doc. A/44/49 (1989) art. 15 and art. 32.
- 72 ILO Convention No. 182 concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labour (Worst Forms of Child Labour Convention), adopted June 17, 1999, 38 I.L.M. 1207 (entered into force November 19, 2000) art. 3.
- 73 International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families (CRMW). Adopted by General Assembly resolution 45/158 of 18 December 1990.
- 74 United Nations General Assembly (2021) A/HRC/48/L.23/Rev.1. Resolution 48/13. 5th October.
- 75 ILO (2022). International Labour Conference adds Safety and Health to Fundamental Principles and Rights at Work. 110th *International Labour Conference*, 10 June.
- 76 ILO (2022). *ILO Declaration on Fundamental Principles and Rights at Work (1998)*, as amended in 2022.

- 77 Gueye, M.K. and de Meyer, T. (2022). *UNGA Resolution on Human Rights: UN General Assembly recognizes Human Right to a Clean, Healthy, and Sustainable Environment*. Available at [https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS\\_857164/lang-en/index.htm](https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_857164/lang-en/index.htm). Accessed on 16 October 2022.
- 78 ILO (2022). *SDG Indicator Metadata: Harmonized Metadata Template - Format Version 1.0*. Available at <https://unstats.un.org/sdgs/metadata/files/Metadata-08-03-01.pdf>. Accessed on 14 September 2022.
- 79 Public Services International (2018). *PSI Municipal Waste Workers Network for English-speaking Africa: CALL TO PUBLIC AUTHORITIES*. 2018. Available at [https://world-psi.org/sites/default/files/documents/research/2.\\_psi\\_waste\\_sector\\_en\\_sp\\_africa\\_nairobi\\_2018\\_-\\_joint\\_call\\_26.10.2018\\_final.pdf](https://world-psi.org/sites/default/files/documents/research/2._psi_waste_sector_en_sp_africa_nairobi_2018_-_joint_call_26.10.2018_final.pdf). Accessed 26 September 2022.
- 80 Gutberlet, J., Besen, G.R., and Morais, L. (2020). *Participatory Solid Waste Governance and the Role of Social and Solidarity Economy: Experiences from São Paulo, Brazil*. *Deteritus*, Vol 13, pp. 167-180.
- 81 ILO (2022). *Resolution concerning Decent Work and the Social and Solidarity Economy*. 110th Session International Labour Conference, 10 June.
- 82 ILO (2015). *R204 - Transition from the Informal to the Formal Economy Recommendation, 2015 (No. 204)*. Available at [https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100\\_ILO\\_CODE:R204](https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:R204). Accessed on 12 September 2022.
- 83 WIEGO (2020). *Guía de los derechos de las personas recicladoras*. Available at [https://www.wiego.org/sites/default/files/2020-12/Guia-de-los-derechos-de-las-personas-recicladoras\\_digital.pdf](https://www.wiego.org/sites/default/files/2020-12/Guia-de-los-derechos-de-las-personas-recicladoras_digital.pdf). Accessed on 12 September 2022.
- 84 WIEGO (2021). *Gender and Waste Project*. Available at <https://www.wiego.org/gender-waste-project>. Accessed on 12 September 2022.
- 85 As set out in the Rio Declaration on Environment and Development, 1992(A/CONF.151/26/Vol.I)
- 86 ILO (2012). *R202 - Social Protection Floors Recommendation, 2012 (No. 202)*. Available at [https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100\\_INSTRUMENT\\_ID:3065524:NO](https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:3065524:NO). Accessed on 12 September 2022.
- 87 Calil, J. and Gutiérrez-Graudiņš, M. and others (2021). *Neglected – Environmental Justice Impacts of Marine Litter and Plastic Pollution*. United Nations Environment Programme (UNEP), April 2021.
- 88 CIEL (2022) *Towards a Global Treaty to End Plastic Pollution Ensuring Meaningful and Effective Stakeholder Involvement in the Intergovernmental Environmental Negotiations*. Centre for International Environmental Law. Available from: [https://www.ciel.org/wp-content/uploads/2022/05/Toward-a-New-Instrument-Addressing-the-Full-Life-Cycle-of-Plastics\\_Public-Participation.pdf](https://www.ciel.org/wp-content/uploads/2022/05/Toward-a-New-Instrument-Addressing-the-Full-Life-Cycle-of-Plastics_Public-Participation.pdf).
- 89 Ibid.  
GMGSF (2021). *Make UNEA 5.2 a game-changer and act for Nature now*. Joint Global Statement adopted as an outcome of the virtual Global Major Groups and Stakeholders Forum 19 held online 7-10 February 2022. Available at <https://wedocs.unep.org/bitstream/handle/20.500.11822/38043/Joint%20Global%20Statement%20GMGSF%202022%20UNEA%205-2.pdf?sequence=6&isAllowed=y>. Accessed on 12 September 2022.
- 90 Center for International Environmental Law (2022). *Towards a Global Treaty to End Plastic Pollution Ensuring Meaningful and Effective Stakeholder Involvement in the Intergovernmental Environmental Negotiations*.
- 91 United Nations Economic Commission for Europe (2005). *Almaty Guidelines on Promoting the Application of the Principles of the Aarhus Convention in International Forums*.
- 92 United Nations (2001). *Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters*.

- 93 The Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazú Agreement) strengthens the link between human rights and environmental defence by posing obligations on the Parties regarding the protection of environmental human rights defenders. It promotes a four-pillar model of environmental democracy.
- 94 Conclusions 70.c and 70.d adopted at the Twenty-sixth meeting of the Working Group of the Parties to the Aarhus Convention, June 2022. ([ECE/MP.PP/WG.1/2022/2](https://unece.org/transport/air/ahc/ahc26/ahc26_70c.pdf)).
- 95 United Nations (2018). *Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean*.
- 96 The Paris Agreement (2015) was negotiated at the 21st conference of the parties (COP 21) of the United Nations Framework Convention on Climate Change (UNFCCC, 1991), with the aim to strengthen the global response to the threat of climate change by keeping the global temperature rise to well below 2°C above pre-industrial levels.
- 97 United Nations Framework Convention on Climate Change (2015). *Cities, Regions, Companies, Investors, Foundations, Universities, Mobilized for Climate Action*. Available at <https://unfccc.int/media/509508/lpaa-primer.pdf>. Accessed 18 October 2022.
- 98 Major groups and other stakeholders include: women, children and youth, indigenous peoples, NGOs, local authorities, workers and trade unions, business and industry, scientific and technological communities, and farmers (as established under Agenda 21, a non-binding action plan adopted at the first UN Conference on Environment and Development in 1992), as well as local communities, volunteer groups and foundations, migrants and their families, older persons and persons with disabilities (as complemented by *The future we want stemming* from the 2012 Rio+20 Conference).
- 99 Center for International Environmental Law (2022). *Towards a Global Treaty to End Plastic Pollution Ensuring Meaningful and Effective Stakeholder Involvement in the Intergovernmental Environmental Negotiations*.
- 100 UNEP (2022). Intergovernmental negotiating Committee to develop an International Legally binding Instrument on Plastic Pollution, including in the Marine Environment. First session, Punta del Este, Uruguay, 28 November–2 December. PP/INC.1/3.
- 101 UNEP (2019). Minamata Convention on Mercury.
- 102 UNEP (2021). Artisanal and Small-scale Gold Mining: Update to the Guidance Document for the Preparation of a National Action Plan to reduce and, where Feasible, eliminate Mercury use in Artisanal and Small-scale Gold Mining. Conference of the Parties to the Minamata Convention on Mercury Fourth meeting Online, 1–5 November. MC/COP.4/6.
- 103 It is important to note a distinction between addressing ASGM activities under the Minamata Convention and IWRS activities under the forthcoming global instrument; ASGM activities are a significant source of mercury pollution, while the IWRS significantly contributes to reducing mismanaged waste and plastic pollution.
- 104 UNEP (N.D). National Action Plans. Available at <https://www.mercuryconvention.org/en/parties/national-action-plans>. Accessed on 14 October 2022.
- 105 UNEP (2022). Insights from ASGM National Action Plans: NAP Data Mining. Available at <https://www.unep.org/globalmercurypartnership/insights-asgm-national-action-plans>. Accessed on 21 September 2022.
- 106 Planet Gold (2022). About the Programme. Available at <https://www.planetgold.org/about>. Accessed on 21 September 2022.
- 107 The manner in which funding for the GEF is secured will be discussed further in Section 3.4.
- 108 Applications are made by national governments. In the three funding rounds so far, 24 projects, one of which addresses ASGM, were approved for funding of USD 100,000-250,000 by the PlanetGold Governing Board.

- 109 United Nations (2022). Mercury, Small-scale Gold Mining and Human Rights Report of the Special Rapporteur on the Implications for Human Rights of the Environmentally Sound Management and Disposal of Hazardous Substances and Wastes, Marcos Orellana. A/HRC/51/35. 8th July. United Nations General Assembly.
- 110 Convention on Biological Diversity (2021). Working Group on Article 8(j). Available at <https://www.cbd.int/convention/wg8j.shtml>. Accessed on 22 September 2022.
- 111 Convention on Biological Diversity (2018). Decision Adopted by the Conference of the Parties to the Convention on Biological Diversity. Conference of the Parties to the Convention on Biological Diversity, Fourteenth Meeting, Sharm El-Sheikh, Egypt, 17-29 November.
- 112 Convention on Biological Diversity (2007). Composite Report on the Status and Trends Regarding the Knowledge, Innovations and Practices of Indigenous and Local Communities. Advisory Group Meeting on Article 8(J) and Related Provisions of the Convention on Biological Diversity, Second meeting, Montreal, 30 April – 03 May.
- 113 Convention on Biological Diversity (2004). *Akwé: Kon Voluntary Guidelines for the Conduct of Cultural, Environmental and Social Impact Assessment regarding Developments Proposed to Take Place on, or which are Likely to Impact on, Sacred Sites and on Lands and Waters Traditionally Occupied or Used by Indigenous and Local Communities*. Montreal, Canada.
- 114 Convention on Biological Diversity (2011). *Tkarihwaï:ri Code of Ethical Conduct to Ensure Respect for the Cultural and Intellectual Heritage of Indigenous and Local Communities Relevant to the Conservation and Sustainable Use of Biological Diversity*. Montreal, Canada.
- 115 Convention on Biological Diversity (2015). *Plan of Action on Customary Sustainable Use of Biological Diversity*. UNEP/CBD/COP/DEC/XII/12, B, Annex. Montreal, Canada.
- 116 Patricia, Borraz, ed. (2000). *Indigenous Participation in the Convention on Biological Diversity Process*. IV International Indigenous Forum on Biodiversity Sevilla, Spain, 24 – 26 March.
- 117 UNEP (2011). The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. Available at <http://www.basel.int/TheConvention/Overview/tabid/1271/Default.aspx>. Accessed on 22 September 2022.
- 118 UNEP (2011). Environmentally Sound Management (ESM) Toolkit. Available at <http://www.basel.int/Implementation/CountryLedInitiative/EnvironmentallySoundManagement/ESMToolkit/Overview/tabid/5839/Default.aspx>. Accessed on 22 September 2022.
- 119 Bracketed numbers and letters indicate the source in the ESM toolkit that the information is drawn from.
- 120 ILO (2019). ILO Centenary Declaration for the Future of Work. *108th International Labour Conference*, Geneva, Switzerland.
- 121 Adopted at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in Quito, Ecuador, on 20 October 2016. The New Urban Agenda represents a shared vision for a better and more sustainable future. It asserts that well-planned and well-managed urbanisation can be a powerful sustainable development tool.
- 122 United Nations (2017). *A/RES/71/256\* New Urban Agenda*. United Nations publication.
- 123 Aparcana, S. (2017). Approaches to Formalization of the Informal Waste Sector into Municipal Solid Waste Management Systems in Low- and Middle-income Countries: Review of Barriers and Success factors. *Waste Management*, vol 61, pp. 593-607.
- 124 Ibid.
- 125 ILO (2019). How to Extend Social Protection to Workers in Informal Employment in the ASEAN Region. Available at [https://www.ilo.org/wcmsp5/groups/public/--asia/--ro-bangkok/documents/publication/wcms\\_735508.pdf](https://www.ilo.org/wcmsp5/groups/public/--asia/--ro-bangkok/documents/publication/wcms_735508.pdf). Accessed 9 November 2022.
- 126 Medina, M. (2010). As many as 500,000 Individuals, Popularly Known as Catadores, are a Critical Source of Recycled Raw Materials for Brazil's Industries. *BioCycle*, Vol. 51, No. 10, p. 32.

- 127 Pereira, A. (2010). National Solid Waste Management Policy – Brazil. English version translated by Pereira. Available at <https://www.wiego.org/sites/default/files/resources/files/Pereira-Brazilian-Waste-Policy.pdf>. Original text available from: [http://www.planalto.gov.br/ccivil\\_03/\\_ato2007-2010/2010/lei/l12305.htm](http://www.planalto.gov.br/ccivil_03/_ato2007-2010/2010/lei/l12305.htm). Accessed on 16 September 2022.
- 128 Gaia Alliance (2019). Inclusion of Waste Pickers in Zero Waste Programs. Available at <https://www.no-burn.org/wp-content/uploads/2021/03/Seria-docuemntos-GAIA-Caso-4-ingles.pdf>. Accessed on 14 November 2022.
- 129 Department of Environment, Forestry and Fisheries (2020). National Waste Management Strategy 2020. Available at <https://www.dffe.gov.za/sites/default/files/docs/2020nationalwaste-managementstrategy1.pdf>. Accessed on 14 November 2022.
- 130 Department of Environment, Forestry and Fisheries and Department of Science and Innovation (2020). Waste picker integration guideline for South Africa: Building the Recycling Economy and Improving Livelihoods through Integration of the Informal Sector. DEFF and DST: Pretoria. Available at <https://wasteroadmap.co.za/wp-content/uploads/2021/02/Waste-Picker-Integration-Guidelines.pdf>. Accessed on 16 September 2022.
- 131 Serrona K.R.B., Yu J., Aguinaldo E., Florece L.M. (2014). Developing a monitoring and evaluation framework to integrate and formalize the informal waste and recycling sector: The case of the Philippine National Framework Plan. *Waste Management & Research*. Vol 32, Issue 9, pp. 882-895.
- 132 Many informal economy workers form cooperatives or associations because labour law doesn't allow them to form legally protected unions.
- 133 International Alliance of Waste Pickers (2022). Waste pickers Around the World (WAW). Available at <https://globalrec.org/waw/>. Accessed on 16 September 2022.
- 134 International Alliance of Waste Pickers (2022). Waste Picker Organisations Map. Available at <https://globalrec.org/waw/waste-picker-organizations-map/>. Accessed 15 September 2022.
- 135 Green Planet (2022). Our History. Available at <https://cooperativaplanetaverde.org/nuestra-historia/>. Accessed on 16 September 2022.
- 136 Cooperative Association of Recyclers of Bogotá (2022). We Build New Spaces for the Benefit of Society and Primarily that of the Planet. Available at <https://asociacionrecicladoresbogota.org/>. Accessed on 16 September 2022.
- 137 Recuperar (2022). Integral Management of Residues. Available at <https://www.recuperarsas.com/>. Accessed on 16 September 2022.
- 138 Medina, M. (2007). *The World's Scavengers: Salvaging for Sustainable Consumption and Production*. Lanham, Altamira Press.
- 139 Parra, F. (2017). Waste pickers in Medellín, Popayán, and Montería receive their First Payment as Recycling Public Service Providers. 23rd November. *Women in Informal Employment: Globalizing and Organizing*. Available at <https://www.wiego.org/blog/waste-pickers-medell%C3%ADn-popay%C3%A1n-and-monter%C3%ADa-receive-their-first-payment-recycling-public-servic>. Accessed on 16 September 2022.
- 140 FCDO/DFID (2016), GEMS4 Programme, Waste Management Outlook, Lagos Nigeria. Palfreman, Joshua
- 141 Henam, S. D., and Bandela, R. D. (2020). *Segregate, Segregate, Segregate: How to make it Work for Solid Waste Management*. New Delhi: Centre for Science and Environment.
- 142 Ibid.
- 143 The 'polluter pays' principle states that the polluter should bear the costs associated with pollution and its prevention and control, as outlined by the OECD and the Rio Declaration. To truly implement the principle, retrospective taxation may also be considered to account for historical contribution to plastic pollution.

- 144 'Common but differentiated responsibilities' is an important principle in international environmental law, acknowledging the different capabilities and differing responsibilities of individual countries in addressing environmental issues.
- 145 Velis, C. (2017). Waste pickers in Global South: Informal Recycling Sector in a Circular Economy Era. *Waste Management & Research*, Vol 35, No. 4, pp. 329-331.
- 146 Environmental and social safeguard systems define the environmental and social objectives and principles that apply to a project and to the staff working on the project. They guide management of the environmental and social risks and impacts, so that the full sustainable development benefits from the project can be realised.
- 147 Plastic credits may add value to plastic waste and leverage its collection, often with the aim to create high-visibility markets for certified recycled plastics and to enhance the livelihood of IWRS workers. Companies or individuals can purchase plastic credits, which in turn finances plastic waste recovery activities. Recent initiatives include Plastic Bank, Thread, BVRio, and Plastics for Change.
- 148 Circulate Initiative (2021). A Sea of Plastics Claims and Credits: Steering Stakeholders Towards Impact. Insights. Available at [https://d5f869f1-4310-4939-88bb-9d398556b445.filesusr.com/ugd/77554d\\_eff5a760596a456a9e565ec52bc687ba.pdf](https://d5f869f1-4310-4939-88bb-9d398556b445.filesusr.com/ugd/77554d_eff5a760596a456a9e565ec52bc687ba.pdf). Accessed on 26 October 2022.; WWF (2021). Position: Plastic Crediting and Plastic Neutrality. Position Paper, No Plastic in Nature, January.
- 149 PROs are a central element for the organisation of all tasks associated with EPR systems. They allow producers and importers to assume responsibility by combining their efforts and jointly managing the arising waste. PROs are the most important stakeholders and are responsible for setting up, developing and maintaining the system as well as for the take-back obligations of the companies involved. PROs are also referred to as system operators.
- 150 Velis, C. (2017). Waste pickers in Global South: Informal Recycling Sector in a Circular Economy Era. *Waste Management & Research*, Vol 35, No. 4, pp. 329-331.
- 151 Talbott, T.C., Chandran, P., and others (2022). Extended Producer Responsibility (EPR) and Waste Pickers. WIEGO Technical Brief, June.
- 152 World Bank (2022). The Role of Extended Producer Responsibility Scheme for Packaging towards Circular Economies in APEC. Washington, DC.
- 153 Center for International Environmental Law (2020). Financing the Sound Management of Chemicals Beyond 2020: Options for a Coordinated Tax. Available at [https://www.ciel.org/wp-content/uploads/2020/09/ipen-ciel-producer-responsibility-vf1\\_9e-web-en.pdf](https://www.ciel.org/wp-content/uploads/2020/09/ipen-ciel-producer-responsibility-vf1_9e-web-en.pdf). Accessed on 27 October 2022.
- 154 SWaCH Pune is India's first wholly waste picker-owned cooperative, with a current membership of 3,800. Since 2008, SWaCH has a Memorandum of Understanding with the Pune Municipal Corporation to provide door-to-door waste collection in the city on a user fee recovery basis.
- 155 Brazil (2010) Law No. 12305 – Brazilian National Policy on Solid Waste. 2nd August.
- 156 Bass, J. (2017). The Potential and Limits of Extended Producer Responsibility: A Comparative Analysis Study. *CMC Senior Theses*. 1693.
- 157 Gore-Langton, L. (2022). Recycled Plastic Prices Soar as Rival Industries Dip into Beverage Producer's Supply. *Packaging Insights*.
- 158 UN Habitat (2021). Waste Wise Cities Data. Available at <https://unhabitat.org/waste-wise-data>. Accessed on 27 October 2022.



UNITED NATIONS HUMAN SETTLEMENTS PROGRAMME  
P.O. Box 30030, Nairobi 00100, Kenya  
[unhabitat-info@un.org](mailto:unhabitat-info@un.org)  
[www.unhabitat.org](http://www.unhabitat.org)

   @UNHABITAT



Norwegian Institute for Water Research

NORWEGIAN INSTITUTE FOR WATER RESEARCH  
Økernveien 94, 0579 Oslo NORWAY  
[www.niva.no](http://www.niva.no)