Global Plastic Action Partnership Evaluation

FINAL REPORT

Authors: Itad and University of Portsmouth's Global Plastics Policy Centre

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Evaluation team

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Disclaimer

The views expressed in this report are those of the evaluators. They do not necessarily represent those of the funder Defra or any individuals and organisations referred to in the report.

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List of acronyms

ANOVA	Analysis of Variance
ASEAN	Association of Southeast Asian Nations
BAU	Business-as-usual
BCR	Benefit–cost ratio
CL	Confidence Level
CS	Case study
DENR	Department of Environment and Natural Resources (Philippines)
DRS	Deposit Return Scheme
EPR	Extended Producer Responsibility
EQ	Evaluation Question
FTE	Full-time equivalent
FY	Fiscal Year
GEDSI	Gender Equality, Disability and Social Inclusion
GEF	Global Environment Facility
GESI	Gender Equality and Social Inclusion
GHS	Ghanaian Cedi
GIS	Geographic Information System
GPAP	Global Plastic Action Partnership
GPC	Global Plastics Policy Centre
GRIPE	Ghana Recycling Initiative by Private Enterprise
HDI	Human Development Index
HDPE	High-density polyethylene
IBRD	International Bank for Reconstruction and Development
IFC	International Finance Corporation
IMW	Inadequately managed waste
INC	Intergovernmental Negotiating Committee
INEC	Instituto Nacional de Estadística y Censos (Ecuador)
KPI	Key Performance Indicator
KPMG	Klynveld Peat Marwick Goerdeler (Consultancy firm)
LDPE	Low-density polyethylene
MEL	Monitoring, Evaluation, and Learning
NAM	National Analysis and Modelling
NGO	Non-governmental organisation
NPAP	National Plastic Action Partnership
NPV	Net present value
ODA	Official Development Assistance

ODK	Open Data Kit (app)
OECD	Organisation for Economic Co-operation and Development
PAP	Plastic Action Partnership
PET	Polyethylene terephthalate
PPE	Personal Protective Equipment
RDF	Refuse-derived fuel
rPET	recycled polyethylene terephthalate
SCS	System-change scenario
SD	Standard deviation
SEAH	Sexual exploitation, abuse and harassment
SIPSN	Sistem Informasi Pengelolaan Sampah Nasional (database)
ToC	Theory of Change
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
US	United States (of America)
USD	United States Dollar
VFM	Value for money
VND	Vietnamese Dong
WEF	World Economic Forum
WRI	World Resources Institute
WWF	World Wide Fund for Nature

Executive summary

Introduction

The Global Plastic Action Partnership (GPAP) was established in 2018 by the World Economic Forum to tackle the escalating global plastics pollution crisis. It provides a neutral, multistakeholder platform for governments, businesses, civil society and international organisations to collaborate on solutions that reduce plastic waste, strengthen waste management systems, and accelerate the transition towards a circular plastics economy. GPAP's flagship model, the National Plastic Action Partnerships (NPAPs), brings stakeholders together within committed countries to co-develop national strategies and roadmaps that provide practical opportunities to reduce plastic pollution. To date, 25 NPAPs have been established and 12 roadmaps produced.

GPAP combines convening power with technical support, scientific modelling tools and grants for the informal waste sector. It aims to deliver measurable reductions in plastic pollution, generate long-term social and economic benefits, and embed inclusivity and equity into national and global policy processes. At the same time, GPAP supports governments and partners in preparing for a global plastics treaty and other international policy frameworks.

Purpose of the evaluation

This evaluation provides an independent, evidence-based assessment of GPAP's relevance, effectiveness, efficiency, equity, impact and sustainability. It has three overarching objectives:

- **Validation** – to determine whether activities and results were delivered as intended.
- **Learning** – to understand GPAP's contribution to reducing plastic pollution and to identify lessons that will strengthen GPAP's approach and wider efforts to curb plastic pollution.
- **Forward-looking analysis** – to assess whether GPAP is on track to achieve its FY2025/26, 2030 and 2040 targets and to generate insights for global efforts to combat plastic waste.

Evaluation approach

The evaluation applied a theory-based, mixed-methods design, to test the GPAP theory of change (ToC). Contribution analysis tested the plausibility of GPAP's influence on outcomes and impacts, recognising the complexity of multi-actor change processes. Methods included: (a) portfolio analysis of all 25 NPAPs and associated roadmaps to map activities, outputs and trends; (b) eight case studies to build national-level contribution stories, structured against GPAP's ToC; (c) cross-cutting analyses on gender equality and social inclusion (GESI) and value for money (VFM); (d) modelling of impact indicators to project GPAP's future contribution towards reducing mismanaged plastic waste and improving socioeconomic outcomes; (e) surveys of informal workers in three countries; (f) synthesis and participatory validation through workshops with GPAP, NPAPs, Defra and other stakeholders.

Methodology highlights:

- Interviews conducted: 100+
- Participatory workshops: 10
- Countries visited: 4
- Documents reviewed: 220+
- Informal workers surveyed: 600+

Evaluation limitations include: (i) data limitations for the modelling and cost benefit analysis; (ii) difficulties in securing participation from key stakeholders; and (iii) case study sampling focussing on more mature NPAPs. In most cases, these limitations have been mitigated and evidence has been triangulated sufficiently to provide confidence in the findings. However, the quantitative results from the modelling and cost-benefit analysis should be considered with caution and used as an initial step in understanding GPAPs added value from which to build upon over time as data becomes more robust.

Key findings

Relevance: GPAP's design is an appropriate response to the challenges that inhibit a transformation of the plastics economy, responding to critical barriers that need to be removed to catalyse system change. The NPAPs provide important spaces to convene the whole plastics value chain that did not exist before, providing a trusted space for consensus building that is essential to meaningful change.

Efficiency: The NPAPs that GPAP has set up are efficient mechanisms to influence systemic change, engaging with multiple stakeholders across the plastics value chain as well as facilitating them to reach a consensus on the scale of the challenge and the change that is needed. While there is scope to improve, especially regarding monitoring evaluation and learning (MEL) systems, overall, GPAP is an efficient programme.

Effectiveness: GPAP has combined its global and national convening power to good effect, creating mutually reinforcing components that deepen commitments to change nationally and globally, recognising the benefits for livelihoods associated with the circular economy, and economic and health benefits linked to reductions in plastic pollution. The NPAP platforms have been particularly effective, providing a pragmatic analysis of the plastics challenge and trusted spaces in which diverse stakeholders can come together and agree upon the solutions needed. This has encouraged public–private partnerships, elevated the voice of informal workers and contributed to the enabling environment for a transformation of the plastics economy. Government engagement typically has been strong but ownership of the roadmaps is not always clear, creating a risk that momentum and a drive for systemic change will be lost.

Impact: Systemic change within NPAP countries is feasible where both upstream and downstream interventions are delivered in tandem, with potentially significant improvements to waste management and waste avoidance. Whilst the roadmaps developed by the NPAPs clearly make the case for a whole-of-value-chain response, delivery of both upstream and downstream interventions is not guaranteed, and more time is needed to understand the extent to which GPAP and the NPAPs can counter vested interests and alter the status quo in the long-term. Nevertheless, GPAP and the NPAPs have contributed to conditions that increase the likelihood of systemic change, providing good VFM and returns on investment. In addition to the NPAPs, a key aspect of this contribution is at the global level, where GPAP's convening of a community of 25 countries is significant for advancing a global plastics treaty, the success of which would potentially have profound implications for the added value of GPAP and its network of NPAPs.

Sustainability: In line with GPAP timeframes, some NPAPs are beginning to transition to the "sustain" phase. But without continued funding, many of the benefits and momentum gained by the NPAPs are likely to be lost with a risk that the reputation of future multi-stakeholder initiatives is damaged. GPAP is working hard to develop funding models that balance NPAP sustainability with NPAP neutrality and is committed to transitioning as many NPAPs as possible to the "sustain" phase.

Conclusions

Conclusion *1*: GPAP has responded to the scale of the plastics pollution crisis and

developed an operational model that provides unique strategic value, nationally and globally, successfully reducing critical barriers that inhibit transformational change of the plastics economy.

Conclusion *2*: Initial evidence suggests the catalytic change that GPAP seeks to achieve is feasible in some contexts and its combination of national and global convening complement each other to strengthen a community of peers that wish to see ambitious change - domestically and internationally.

Conclusion *3*: GPAP has refined an effective approach to energising a wide range of stakeholders and efficiently reaching a consensus for change which is replicable across differing contexts.

Conclusion *4*: The roadmaps that are at the heart of the GPAP model provide an effective communication and strategic tool to promote coordinated, system-wide change and a clear, compelling rationale for action. The roadmaps benefit from broad stakeholder involvement and support, however, further clarity on ownership and implementation leadership would strengthen delivery and help ensure that gains to date are sustained and scaled.

Conclusion *5*: GPAP's decision to expand rapidly before it had time to build its evidence base was a necessary trade-off given the scale of the plastics pollution crisis and the urgent need for global systemic change. Set-backs in the global plastics treaty and a retreat of donor funding across all sectors leave GPAP with a challenging funding landscape as it tries to support 25 NPAPs into the sustain phase with a nascent evidence base to demonstrate their added value.

Conclusion *6*: A transition to financial sustainability for NPAPs has begun in some countries, providing valuable insights of future funding models. However, these models present possible tensions between sustainability and neutrality that could undermine NPAP effectiveness.

Conclusion *7*: Ultimately, GPAP and the NPAPs have made important contributions to increasing the enabling environment for circular economies and accelerating the adoption of progressive policies that incentivise reductions in plastic pollution, becoming important parts of the plastics landscape. The next phase presents a critical opportunity to convert this momentum into sustained, system-wide circular economy transformation.

Recommendations

Following a co-creation workshop to develop the recommendations with WEF and Defra, going forward GPAP should:

Recommendation 1: Consolidate available resources around NPAPs that offer the greatest strategic opportunity for transforming plastics economies nationally and globally.

Recommendation 2: Prepare NPAP Steering Boards for a responsible transition to the sustain phase.

Recommendation 3: Develop a GPAP Community of Practice to accommodate GPAP alumni and provide on-going support and sharing of expertise and best practice.

Recommendation 4: Continue to strengthen and support the negotiations for a global plastic pollution treaty through impartial, multistakeholder dialogue and knowledge sharing.

Recommendation 5: Overhaul GPAP's approach to supporting vulnerable groups and the informal sector whilst ensuring that GPAP and NPAPs are GEDSI-empowering wherever possible.

Recommendation 6: Apply lessons learnt to date about how to best support the shift from roadmap development to roadmap delivery, supporting NPAPs to drive forward the systemic change needed to address the plastics pollution crisis.

Recommendation 7: Review and refine GPAP's MEL systems to align with its added value, enhance the effectiveness of GPAP and the NPAPs, and support long term decisions that will aid sustainability.

1 Introduction

Plastic pollution is one of the most significant environmental, health and justice challenges of the 21st century. Global plastic production has risen dramatically over the past century and is projected to continue growing, while waste management systems have struggled to keep pace.[1] The result is widespread environmental leakage which can be detected across the biosphere.[2] The impacts of plastic pollution are generated throughout the entire plastics lifecycle. Plastic production and disposal contribute to greenhouse gas emissions, while plastic debris and microplastics disrupt ecosystems, harm wildlife, and undermine ecological processes. Emerging research also points to growing concerns about potential risks to human health associated with plastic chemicals and particles.[3] The social and economic effects of plastic pollution are unevenly distributed, with the poorest communities often bearing a disproportionate pollution burden.

In the last decade, a growing body of research has demonstrated that waste management alone cannot address the problem; rather, coordinated interventions across the plastics lifecycle can dramatically reduce pollution, in some estimates by up to 80% by 2040.[4] The OECD's Global Plastics Outlook argues that responses to plastic pollution require integrated policy approaches that combine material efficiency, circular economy strategies, and stronger waste management systems.[5] These analyses have helped reframe plastic pollution from a downstream waste problem to a complex socio-technical challenge embedded within wider economic and production systems.

As a more nuanced understanding of the drivers of plastic pollution has evolved, so too has the plastics governance landscape. International negotiations towards a global plastics treaty reflect the recognition that fragmented national measures alone cannot address a fundamentally transboundary problem.[6] However, the prevailing economic and geopolitical context has created a challenging environment for negotiations, and the treaty remains a work in progress, At the same time, governments at national and regional levels have begun to introduce new policy instruments to reduce plastic leakage and improve resource efficiency, including bans on certain single-use plastics, Extended Producer Responsibility (EPR) schemes, and circular economy strategies.[7] The private sector has also become more

[1] Geyer, R., Jambeck, J.R. & Law, K.L. (2017). Production, use, and fate of all plastics ever made. Science Advances, 3(7), e1700782; OECD (2022). Global Plastics Outlook: Economic Drivers, Environmental Impacts and Policy Options. Paris: Organisation for Economic Co-operation and Development.

[2] Jambeck, J.R., Geyer, R., Wilcox, C., Siegler, T., Perryman, M., Andrady, A., Narayan, R. & Law, K. (2015). Plastic waste inputs from land into the ocean. Science, 347(6223), 768–771.

[3] Deeney, M., Hamelin, L., Vialle, C., Yan, X., Green, R., Yates, J. & Kadiyala, S. (2026). Global health burdens of plastics: a lifecycle assessment model from 2016 to 2040. The Lancet Planetary Health, 10(1).

[4] Lau, W.W.Y., Shiran, Y., Bailey, R.M., Cook, E., Stuchtey, M., Koskella, J., Velis, C. et al. (2020). Evaluating scenarios toward zero plastic pollution. Science, 369(6510), 1455–1461.

[5] OECD (2022). Global Plastics Outlook: Economic Drivers, Environmental Impacts and Policy Options. Paris: Organisation for Economic Co-operation and Development.

[6] Cowan, E. & Tiller, R. (2021). What shall we do with a sea of plastics? A systematic literature review on how to pave the road toward a global comprehensive plastic governance agreement. Frontiers in Marine Science, 8, 798534.

[7] Sundqvist, H. & Åkerman, M. (2024). Creating conditions for sustainability transformation through transformative governance: The case of plastic food packaging in Finland. Journal of Cleaner Production, 434, 140296.

active. Companies across multiple sectors have committed to reducing their reliance on virgin plastic, redesigning products and packaging, and testing alternative logistic models focused on reuse and refill. Yet private sector initiatives remain limited in scope and scale, with many companies content not to challenge the status quo, placing the environmental agenda under pressure to remain relevant.

Public awareness of plastic pollution has also risen sharply over the past decade and companies have faced growing scrutiny over their plastic footprints, leading to increased pressure from citizens, investors and regulators. This heightened public concern has helped push plastic pollution higher on political agendas and has created momentum for new initiatives aimed at accelerating coordinated global action.

Alongside this surge in attention, researchers have increasingly emphasised that effective responses must address the social and political dimensions of plastics governance. Questions of participation, equity and power shape how plastic pollution is produced, managed and experienced across different societies, highlighting the need to recognise the roles of Indigenous communities and informal waste workers, who are often central to waste management systems but remain underrepresented in policy processes.[8] Against this backdrop, the Global Plastic Action Partnership (GPAP) emerged as a prominent platform for coordinated action on plastic pollution.

The global plastics landscape has changed significantly since its establishment. Scientific understanding of the environmental and health impacts of plastics has expanded rapidly, international negotiations towards a legally binding global plastics treaty are underway, and circular economy approaches have gained increasing prominence in both policy and industry strategies.[9] Yet the stark reality is that progress in reducing plastic pollution and its impacts on people and nature has been limited. Plastic production and pollution continue to rise, private sector action remains constrained, and the fractured geopolitical context is making coordinated action more difficult, not less. This context makes the timing of this evaluation particularly relevant to provide important insights, lessons and recommendations as GPAP continues into the future.

[8] Liboiron, M. & Cotter, R. (2023). Review of participation of Indigenous peoples in plastics pollution governance. Cambridge Prisms: Plastics, 1, e16.

[9] March, A., Tsouza, A., Nieminen, L., Winton, S., Arora, H., Shejuti, S., Walker, T. & Fletcher, S. (2024). National action plans: Effectiveness and requirements for the global plastics treaty. Cambridge Prisms: Plastics, 2, e11.

2 Evaluation approach and methodology

2.1 Purpose, objectives and scope

This evaluation provides an independent, evidence-based assessment of GPAP's relevance, effectiveness, efficiency, equity, impact and sustainability. It has three overarching objectives:

- **Validation** – to determine whether GPAP has delivered its activities and results as intended.
- **Learning** – to understand GPAP's contribution to reducing plastic pollution and identify lessons that will strengthen GPAP's approach and wider efforts to curb plastic pollution.
- **Forward-looking analysis** – to assess whether GPAP is on track to achieve its FY2025/26 and 2040 targets and to generate insights for global efforts to combat plastic waste.

The evaluation is primarily focused on eight countries[10] where roadmaps have been delivered, with the first GPAP engagement in 2018. The other 17 countries have been considered in the evaluation to better understand the process and approach of GPAP and any efficiencies achieved as GPAP has learnt and adapted. A modelling approach has also been applied to look ahead and understand the extent to which GPAP is on track to meet its 2040 objectives. In addition, the evaluation has assessed the work GPAP has done on the global stage, convening and facilitating countries in support of global action on plastic pollution.

2.2 Evaluation questions

During the inception period of the evaluation, the evaluation team worked with the GPAP team and Defra to refine and verify a GPAP theory of change (ToC) included in Section 3. The ToC underpins the evaluation approach and has been used to inform a set of core evaluation questions, set out below:

- How relevant is GPAP to the current plastic pollution context and how suitable is its model for delivering national and global change?
- To what extent has GPAP strengthened trust and improved the effectiveness of interventions through public–private consultations?
- To what extent has GPAP reduced mismanaged plastic, and have the environmental and socioeconomic benefits been felt equitably? Are there any unintended (positive or negative) results?
- What has worked well and not so well, and what does this tell us about GPAP's efficiency and effectiveness?
- To what extent has GPAP been able to generate sustainable results and a momentum towards 2040 objectives?
- Overall does GPAP represent good value for money (VFM)?
- What lessons can be learnt to improve GPAP going forward and for efforts to counter plastic pollution more widely?

[10] Ecuador, Ghana, Indonesia, Mexico City, Nigeria, Peru, Philippines and Vietnam.

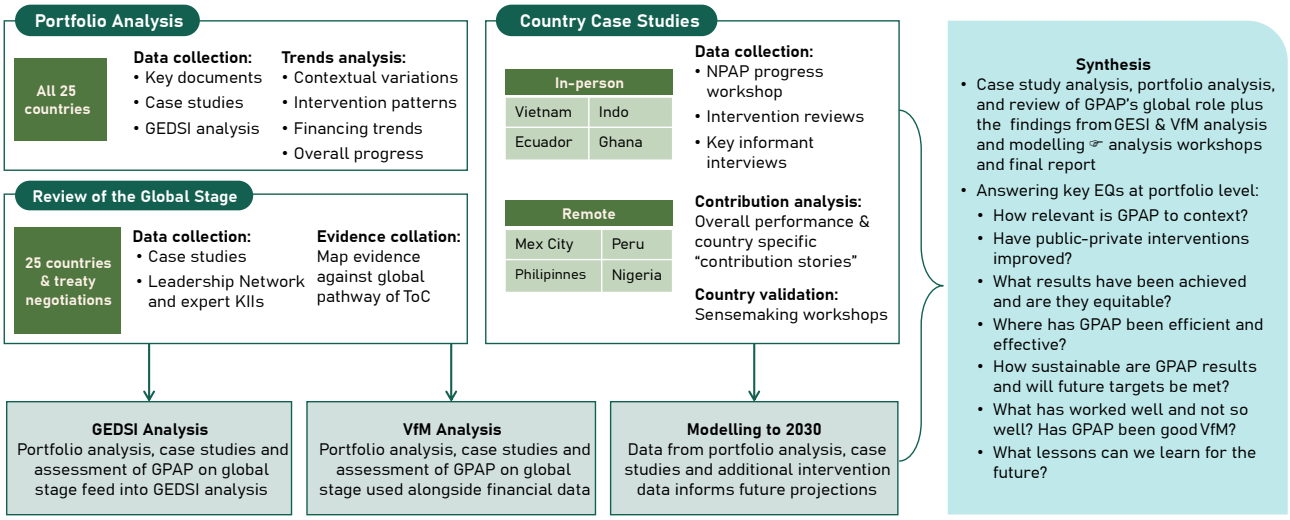
2.3 Design and methods

The evaluation applied a mixed-methods, theory-based approach, drawing on qualitative and quantitative data to test the ToC. Using contribution analysis, the evaluation has tested and validated the extent to which GPAP has contributed to change at the national and global levels. Informed by these results and drawing on nationally-available data, the evaluation has modelled future projections to assess the likelihood of GPAP achieving its intended objectives and targets in the future.

In summary, there were six phases to the evaluation:

- **The first phase** involved **portfolio analysis** to provide a high-level overview of GPAP, aggregating all NPAP membership profiles, all roadmap interventions, baselines and targets. This allowed a review of trends and patterns that could test critical assumptions and characteristics of GPAP across the portfolio.
- **The second phase** conducted eight country **case studies.** Four country case studies included field visits - Viet Nam, Indonesia, Ecuador and Ghana - and four were conducted remotely – Mexico City, Nigeria, Peru and the Philippines. Contribution analysis was used to provide national-level "contribution stories" structured against the GPAP ToC (see separate annexes). As part of these case studies, the evaluation gathered evidence around GPAP's role on the global stage and the extent to which the NPAPs perceive this support as valuable.
- **The third phase** was focused on two **cross-cutting issues.** Gender equality and social inclusion (**GESI) analysis, VFM analysis and cost-benefit analysis** judged the extent to which GPAP has considered GESI dynamics in its design and reached different demographics through its results and the extent to which the programme has been a good use of resources. These cross-cutting analyses drew on the portfolio analysis, the case studies, key documents, the modelling (see below) and limited additional data collection to fill key gaps.
- **The fourth phase involved undertaking informal worker surveys.** These surveys were conducted in Ghana, Ecuador and Viet Nam, sampling 200 informal workers each. The individual workers were not directly associated with GPAP although may have been part of associations that were members of the NPAP. The surveys provided insights that have been valuable for the evaluation to understand the wider context and what factors influence informal worker conditions.
- **The fifth phase** was the **modelling**, which gathered available data in four countries: Ecuador, Ghana, Indonesia and Viet Nam. The modelling considered GPAPs impact indicators, focused on (1) reduced mismanaged waste and (2) socioeconomic benefits. The results indicate the extent to which impact targets have been achieved to date and whether future targets will be met by 2030 and 2040. See Annex 5 for further information on the modelling approach.
- **The sixth phase** was **synthesis** – using the findings from the previous phases to collectively answer the core evaluation questions, the evaluation team developed the findings and conclusions set out in this report through a series of analytical workshops.

Figure 1. Evaluation approach diagram



For more information about the evaluation methodology (including our approach to ethics and safeguarding), please refer to the separate Inception Report.

2.4 Limitations

Table 1 presents the limitations to the evaluation, which include: (i) data limitations for the modelling and cost benefit analysis; (ii) difficulties in securing participation from key stakeholders; and (iii) case study sampling focussing on more mature NPAPs. In most cases, these limitations have been mitigated, and evidence has been triangulated sufficiently to provide confidence in the findings. However, the quantitative results from the modelling and cost-benefit analysis should be considered with caution and used as an initial step in understanding GPAPs added value from which to build upon over time as data becomes more robust.

Table 1: Evaluation limitations

Risk	Nature of risk and mitigations
Limited waste management and plastics data	Several points were built into the evaluation to ensure that evidence is collated from as many sources as possible from GPAP, NPAPs, government and the private sector. However, data quality and quantity are general limitations across the sector in all countries. In particular, it has limited our confidence in the modelling and cost-benefit analysis which was only deemed feasible in four countries.
Limited availability of comparable programmes and datasets, for example to enable us to benchmark key cost drivers	This limited the VFM analysis conducted and made it more difficult to make judgements of GPAP's added value compared to alternative providers. Sensitivity was applied to the cost-benefit analysis to account for any uncertainty.
Difficulty securing participation from key stakeholders	The level of engagement of government officials in the evaluation was low and key officials such as NPAP representatives involved in the global plastics treaty negotiations were not included in data collection.

Risk	Nature of risk and mitigations
Country selection for case studies	Due to budget constraints, it was only possible to conduct eight case studies out of a possible 25 countries. Given the number of variables across the countries it is not possible to generate a representative sample from this number and so countries were selected where the evaluation might be expected to see results – i.e. more mature NPAPs. This makes sense but means that the country selection is not representative of newer and less developed NPAPs. This has been factored into the analysis.
Range of small grants	The countries selected for in-person case studies only represented four out of 31 small grants provided. While the remote case studies also reviewed relevant small grants, it was not possible to conduct in-depth data collection of small grant beneficiaries. A thorough review of the small grants reports complemented by insights from our informal worker surveys provided sufficient insight to make judgements about relevance, efficiency and effectiveness.
GPAP MEL systems	The data collected by GPAP is quite light-touch, does not always focus on GPAP's added value, and heavily reliant on self-reporting which typically is not validated. This has meant that the evaluation could not fully rely upon data reported within GPAP's MEL systems.
Informal worker survey	After careful consideration, it was deemed worthwhile to conduct the informal worker surveys in three countries, not four as expected. This was due to an expected limited influence of the NPAP on informal workers in Indonesia. Surveys were conducted in Ecuador, Viet Nam and Ghana but did not directly include NPAP or GPAP beneficiaries. The survey results, therefore, provide more generalised insights of informal workers and their conditions. This has still been valuable to the evaluation, helping to understand significance and relevance of GPAP interventions.
Compressed evaluation timeline	The contract start-up was later than planned, which has led to a more compressed timeline (recognising that the evaluation is needed to inform Defra's future programming and therefore needs to be completed by the end of March 2026). As such, case study data collection of all eight case studies ran in parallel, meaning there was no opportunity for a pilot case study and survey data collection had to come after the case studies were largely complete. This limited the extent that survey results could inform the case study data collection, limiting the ability to build up a fuller picture of the quantitative data with qualitative explanation.

2.5 Report structure

The remainder of this report is structured as follows: **Section 3** sets out the GPAP approach, providing a brief overview of its purpose, structure and delivery model. **Section 4** sets out the evaluation findings, organised by relevance, efficiency, effectiveness, impact and sustainability. **Section 5** provides the evaluation Conclusions and the recommendations that were co-developed with World Economic Forum (WEF) and Defra are set out in **Section 6**.

The annexes provide further information on methods and analysis and are accompanied by a separate document with additional annexes that provide detailed accounts of the country case studies.

3 The GPAP approach

GPAP brings together governments, private sector actors, civil society and international organisations to develop and support country-level partnerships that aim to catalyse investment, policy and innovation towards building a circular plastics economy. The core objectives of GPAP are to

1. Reduce the amount of mismanaged plastic waste and plastic pollution.
2. Improve plastic waste management practices.
3. Generate long-term social, environmental and economic benefits in partner countries.

GPAP has received close support from Defra from the outset, receiving £18.4 million up to December 2025 (and £20.5 million by March 2026) of GPAP's total budget of £34.4 million up to December 2025. GPAP has additionally received funding from the Canadian government of approximately £10 million with a focus on gender equality, social inclusion (GESI) and biodiversity. Approximately £1.5 million has been received from the Coca-Cola Foundation and £2.3 million from a group of GPAP founding companies (Dow, Nestle, Pepsi and Coca Cola Company)

GPAP's flagship model is the National Plastic Action Partnerships (NPAPs), which function as impartial, inclusive platforms within committed countries, convening stakeholders across the plastics value chain. These range from policymakers and business leaders to local communities and non-governmental organisations. Through these partnerships, GPAP supports the development and implementation of nationally tailored strategies and roadmaps aimed at reducing plastic waste, boosting sustainable waste management, and encouraging circularity and reuse. A key part of this process is use of GPAP's National Analysis and Modelling (NAM) tool, which uses available national data to provide a baseline of the current plastics waste situation. It then models future plastic waste in 2026, 2030 and 2040 under different change scenarios.

The NPAP approach has been implemented in 25 countries and is broadly centred around three key phases with the following goals:

- → ***Prepare*:** Align with the government, build stakeholder engagement and establish the organisational and operational structures of the NPAP.
- → ***Build*:** Generate evidence-based insights to feed into the development of a national action roadmap and strengthen community engagement.
- → ***Sustain*:** Grow the NPAP community and members' ownership by increasing coordination and collaboration and leveraging initiatives from different partners.

GPAP has a small grants mechanism that funds activities of local organisations working to improving the quality-of-life and representation of informal waste workers – a key principle of GPAP.

GPAP also provides a convening function on the global stage, supporting NPAP country representatives to prepare for global plastics treaty negotiations, share knowledge and best practice and build a community of peers who want to see meaningful change.

The GPAP Global Secretariat oversee global operations, manage the small grants mechanism and provide support to NPAPs through three regional advisors. The Global Secretariat works closely with a set of core partners and member groups:

- ***GPAP Steering Board*:** Seven members from the UK and Canadian governments, civil society and the private sector, oversee the Global Secretariat, setting strategic direction.

- ***Governments*:** The Minister for the Environment typically chairs the NPAP Secretariat and represents the NPAP on the global stage.

- ***Host organisation*:** The government pre-approves a selection of organisations to be put forward as potential hosts, with the final one chosen by the GPAP Secretariat through a competitive process. The host then oversees delivery of NPAP activity on the ground.

- ***NPAP Secretariat*:** A small unit within the NPAP which provides operational and logistical support for key events and reporting quarterly to GPAP.

- ***NPAP Steering Board*:** 15-20 NPAP members representing government, private sector, informal sector, civil society and academia, and providing strategic direction to the NPAP.

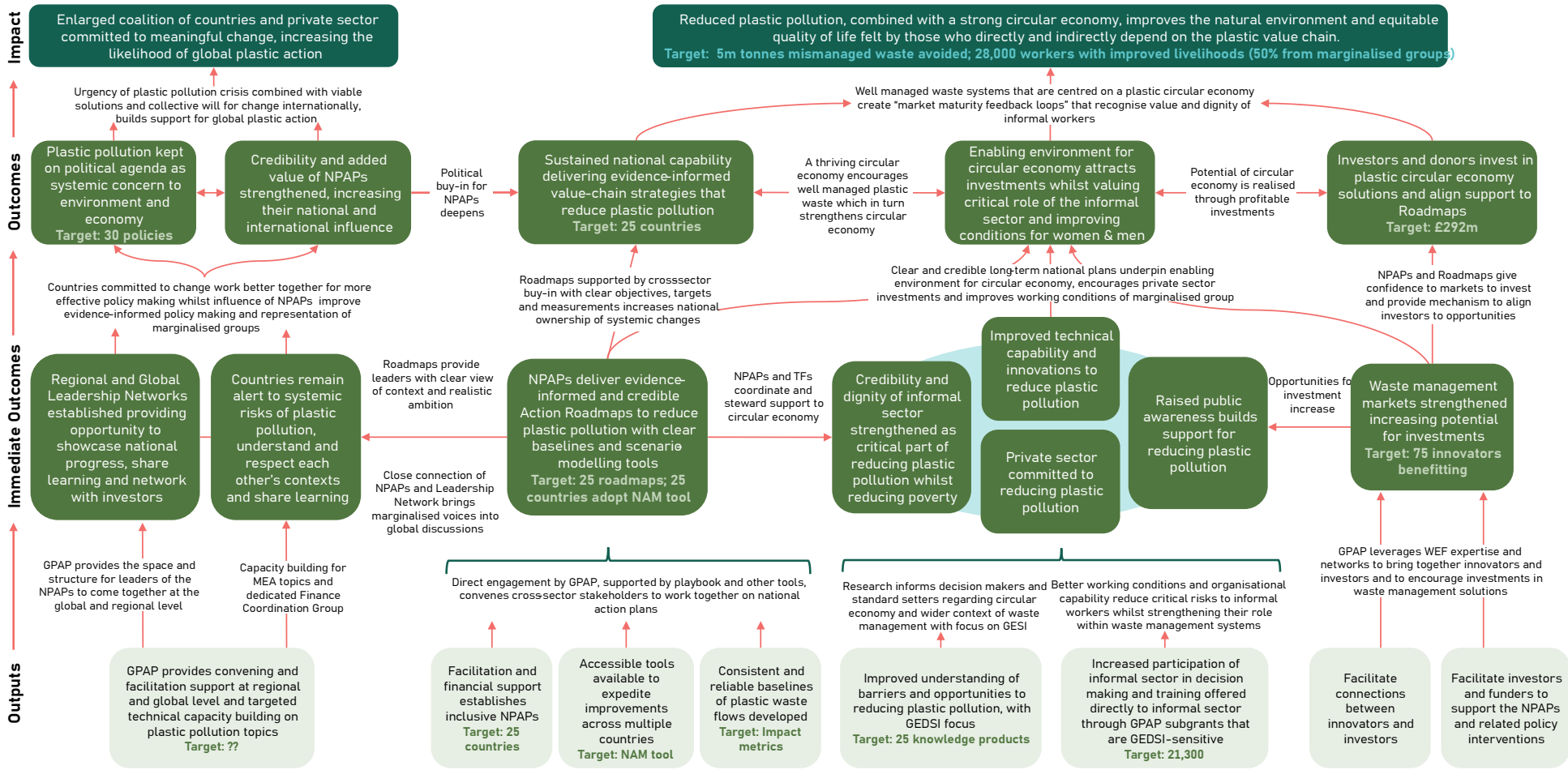
- ***NAM tool partners and metric consultants*:** The NAM tool is a specialised tool to estimate baselines and scenarios for plastic waste, delivered by a small number of international consultancy firms.

- ***Metric Advisory Group*:** Made up of 15-20 experts, this group advises the NAM tool process, validating data and assumptions put forward by the NAM tool partners.

Together, these partners work with NPAP members (that can number in the 100s) to identify the scale of the plastics waste challenge and find consensus on the changes that are needed. This consensus is captured in a roadmap that sets out the agreed changes and is accompanied by a financial roadmap that attempts to cost those changes and suggest where financing could come from. To date 12 roadmaps and four finance roadmaps have been published or drafted.

See Figure 2 for the GPAP ToC, including an illustration of GPAP objectives and its core activities.

Figure 2: GPAP theory of change



4 Findings

4.1 Relevance

Summary: GPAP's design is an appropriate response to the challenges that inhibit a transformation of the plastics economy, responding to critical barriers that need to be removed to catalyse system change. The NPAPs provide important spaces to convene the whole plastics value chain that did not exist before, providing a trusted space for consensus building that is essential to meaningful change. At times, adherence to GPAP's model has reduced its relevance to specific contexts and the rationale for expanding to 25 countries is unclear.

Finding 1

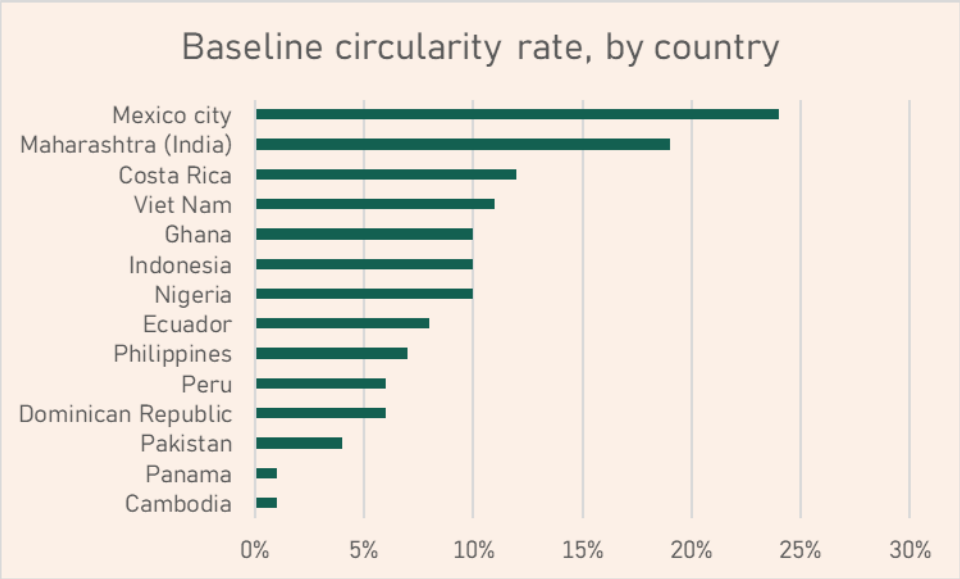
GPAP's approach of mobilising a coordinated response across the whole plastics value chain – at the national, regional and global level – is highly relevant to meeting the global plastics pollution crisis where key stakeholders are often operating in silos and more vulnerable groups struggle to have their voices heard.

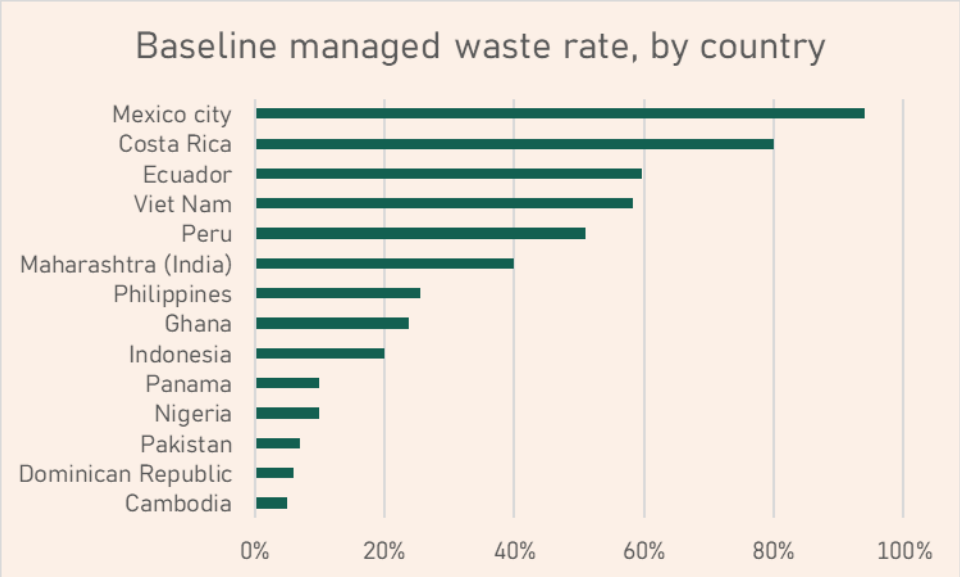
The scale and severity of the plastic pollution crisis make it an urgent global problem that all countries need to work together to address and it is right that GPAP and its donors have come together to show leadership on the issue. Informed by a good understanding of the plastics value chain, GPAP has been designed to address strategic barriers that inhibit the systemic action that is needed.

There are four key barriers that GPAP has prioritised: (1) the absence of a shared understanding of the scale of the problem and urgency of action; (2) a lack of consensus on what change is needed and how ambitious to be; (3) siloed ways of working that inhibit collaborative ways of working across the plastics value chain; and (4) financing needed to bring about systemic change. GPAP's design is focused on removing these barriers, primarily through the creation of multistakeholder dialogue platforms. In all of the case study countries, there was a need for such a platform to bring stakeholders together from across the plastics value chain, agree on a shared appraisal of the problem, and work together to identify what change is needed and how to get it.[11] This approach has been relevant across all 25 countries despite each one having varying levels of baseline capability at the start of the NPAP process (see Figure 3).

[11] Each NPAP is set up at the request of the host government and in each of the case studies reviewed for this evaluation, the platforms were considered to add value, filling an important gap.

Figure 3: Baseline *circularity rate* and *managed waste rate* by country at the start of the NPAP process





The portfolio analysis conducted as part of this evaluation shows that all expected stakeholders (see Figure 4) are represented within the NPAP memberships. On average, the public sector accounts for 25% of members; private sector for 36% (around 40% of which are large corporations); civil society and academia is 30%; international organisations are 7%, and the informal waste sector makes up 1% on average.

While this is a relatively small proportion of informal workers, the space that NPAPs provided to vulnerable groups is particularly important as they do not ordinarily have good access to private sector and government decision-makers. Complementing these more powerful actors and elevating the voices of the marginalised is appropriate to the NPAP contexts. However, only in a small number of NPAPs did the involvement of vulnerable groups really redress existing power imbalances. As the informal worker survey conducted as part of this evaluation shows, there are significant variations in how well organised informal workers are

with implications for how well they may be able to engage in the NPAPs (see Textbox 4 on GESI).

There is, however, variability across countries in NPAP membership composition. High and upper-middle-income countries tend to have a higher percentage of members from the private sector, as well as the informal waste sector. On the other side, lower-middle and low-income countries tend to have a greater presence of civil society and academia organisations, as well as international organisations. In summary, the NPAPs include the right stakeholders and, although not always equal in number, all stakeholders are considered to have their voices heard within the NPAPs (Finding 10).

Figure 4: The range of stakeholders expected to form the NPAP membership (NPAP Toolkit, 2024)

This is reflected in a comment made by the Vice-Chair of the NPAP in Viet Nam:

> *"The Viet Nam NPAP is currently one of the few initiatives capable of establishing an effective coordination mechanism with more than 200 partners, connecting government agencies, the business sector, international organisations and the community of experts in environment, circular economy and plastic waste management."*[12]

GPAP has also played the role of convener at the regional and global level, bringing together representatives of NPAP countries in preparation for global plastics treaty negotiations (see Finding 3) and has encouraged and supported regional convenings. For example, in Peru, GPAP has facilitated dialogues among Latin American NPAPs through virtual meetings and an in-person meeting in Panama. This led to a regional vision, sharing of labour between the NPAPs, and the establishment of working groups (e.g. on communications, fundraising, inclusion) together.[13] Similarly, GPAP built regional connections across NPAPs in Asia and with ASEAN (Association of Southeast Asian Nations) partners and presented plans for a study into ASEAN trade policies for plastics circularity.[14]

The added value of WEF as a convener has been helpful to mobilise the initial NPAP membership, using its reputation to bring to the table key decision-makers and influential

[12] Mr Vu Duc Dam Quang, Deputy Director General of the International Cooperation Department of the Ministry of Agriculture and Environment and now Vice-Chair of Viet Nam NPAP. Source: https://www.weforum.org/stories/2025/08/green-warriors-viet-nams-informal-waste-workers/

[13] Peru CS.

[14] GPAP (2025) GPAP Visit Indonesia Viet Nam Jul 25 slide deck.

stakeholders, such as ministers responsible for the environment, trade, finance and foreign affairs, and multinational corporations (see Finding 5). The participatory processes adopted are also appropriate to the needs of the context, providing an important space for dialogue, collaboration and consensus-making (see Finding 10).

Finding 2

The NPAP roadmaps provide an important common reference point and shared strategy – underpinned by baseline data - that typically did not exist before, collating existing interventions while raising the ambition to do more.

In all of the case study countries, some form of action plan or strategy existed that, at least in part, addressed plastic pollution. The NPAP roadmaps built on this, providing a comprehensive plastics-focused set of actions that illustrate the advantages of a coordinated systemic approach while raising awareness across the value chain of the full breadth of existing and hoped-for interventions. This provided a valuable common reference point for everyone within the plastics value chain that did not previously exist.

In essence, the roadmaps showcase the need and added value of a coordinated, multistakeholder approach which is an important first step to mobilising collaboration across the value chain. They provide valuable insights of how this might be achieved, setting out pathways for change that reduce uncertainty and anxiety about what change may involve that can cause resistance to adopting progressive policies (see also Finding 10).[15] The roadmap process also allowed for discussions between stakeholders which were valuable for surfacing important nuances or contradictions that needed to be ironed out to make the roadmaps more relevant to the context. For example, in the Philippines, health concerns regarding plastic incinerators were raised by informal workers during the NPAP proceedings, and producers in Nigeria were able to give a reality check about how much recycled polyethylene terephthalate (rPET) they had access to given that most rPET feedstock is exported to Europe where higher prices can be received.[16]

Adding to roadmap credibility, the provision of comprehensive baselines and scenario planning have addressed another critical barrier to action – the absence of data. In all countries reviewed, data quality, quantity and consistency were key issues, preventing a common understanding of the problem and limiting evidence-informed decision-making. For example, in Nigeria, there were previously big discrepancies between the numbers that the government typically used to estimate the waste produced nationally and what was perceived to be the case by private sector and civil society observers.[17] While the data presented in the roadmap are not perfect, GPAP's focus on data modelling has provided a much-needed and pragmatic starting point.

Although, overall, the roadmaps and the process behind them was seen as positive, there has also been some scepticism about how much value they really add; and there was a sense from some that good polices already exist, and it is the delivery of them that matters.[18]

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[15] Gifford (2011) *The Dragons of Inaction: Psychological barriers that limit climate change mitigation and adaptation;* American Psychologist, May-June.

[16] KII1.

[17] Prior to the Roadmap, the Nigerian government estimated that 2m tonnes of plastic waste was produced in Nigeria whereas the NPAP Roadmap estimated it was more like 18m tonnes. *Nigeria Contribution Story.*

[18] KII2; Philippines CS; Nigeria CS.

Finding 3

GPAP's demand-led approach and use of competent host partners helps ensure that NPAP engagement and the roadmaps are aligned to the local context and national priorities.

GPAP engagement within each country is instigated by a request from the host government for support. This demand-led approach is appropriate given the importance of government buy-in for GPAP's success. GPAP is careful to select NPAP hosts who have good local knowledge of the political economy, trusted networks, and an awareness of existing policies and interventions to tackle plastic pollution. This has led to roadmaps aligned with national plans and policy priorities on plastic pollution, complementing and reinforcing existing national strategies.

Delivering multistakeholder platforms that enable system change of complex value chains in 25 countries requires a significant amount of context awareness, time and energy. Having government buy-in and the right host from the outset is key. In turn, the GPAP team has complemented the host, providing useful tools and guidance (see Finding 5), sharing good practice and examples from other countries, providing technical support, and leaning in when more challenging periods arise.

At times, the engagement from GPAP has been considered too close, and in one case it was felt that GPAP concerns overrode local needs.[19] The GPAP model has also been considered too formulaic in some cases, creating layers of NPAP structure that are unnecessary and roadmaps that lack the desired level of detail or contextual relevance. For example, in the Philippines, despite having a local host, the roadmap development was led by consultants based in Indonesia and concerns were raised that the final roadmap was not as specific and tailored as some NPAP members had expected it to be;[20] in Nigeria, the original modelling contract was abandoned as NPAP members doubted the quality of the modelling due to no in-country presence of the consultancy firm chosen (a second contract was given to a consultancy with in-country presence which improved the process);[21] and similar concerns were raised in Mexico City.[22] In contrast, the Plastic Action Partnership (PAP) in Mexico City and the NPAP in Indonesia have perhaps been given too much freedom, with informal workers excluded from the processes, which goes against GPAP objectives and principles.

Finding 4

GPAP's "25 by 25" strategy responds to the global scale of the challenge and the perceived benefits of a critical mass of countries engaging in systemic change of the plastics economy. While each country chosen is relevant to GPAP and Defra objectives, the rationale for expanding to 25 countries is not well articulated and puts pressure on GPAP to maintain a wide geographic coverage at a time when many donors are scaling back funding.

One of GPAPs main objectives has been to set up NPAPs in 25 countries, which it has achieved. This "25 by 25" strategy has grown GPAPs footprint substantially to cover a significant number of countries in three key continents: Africa, South America and Asia – all of which are relevant to GPAP and Defra objectives.

[19] KII3.

[20] It should be noted that the consultant was unable to visit the Philippines more than once due to budget constraints (Indonesia CS).

[21] Nigeria CS.

[22] Philippines CS; Nigeria CS; Mexico City CS.

Figure 5: Map of NPAP locations

Although the "25 by 25" target seems impressive, the strategy has not had universal support from GPAP senior leadership with some questioning the rationale for such an expansion – a rationale that does not have a strong institutional memory.[23] From what this evaluation can ascertain, there were a number of reasons why "25 by 25" may have become a target:

1. GPAP felt it needed a large geographical footprint to have a noticeable impact.
2. A large cohort of countries with roadmaps already in place would encourage a global plastics treaty.
3. "25 by 25" sounded good as a communications strapline.

While all these reasons have merits, there is little evidence or a well-informed hypothesis underpinning the strategy as might be expected given its cost implications, and it is not sufficiently clear what success would look like, other than there being 25 NPAP platforms. Although those interviewed for this evaluation were glad that the target did not exceed 25 countries, the lack of clarity on what exactly the strategy wanted to achieve means that no-one can actually be certain that 25 is enough either. This lack of clarity is problematic when judging the relevance of this strategy for the evaluation and comes with opportunity costs that are worthy of consideration: fewer countries may have meant more resources could have been invested for NPAPs to reach the "sustain" phase (see Finding 19), or more resources could have led to greater inclusion of sub-national governance structures, or resources could have been channelled to other complementary programmes while GPAP proved its concept.

Despite these shortcomings within the strategy, GPAP's current global footprint does have important benefits:

- The reach to 25 countries gives GPAP a global presence that is beyond any of its peers, which has increased the added value of GPAP regarding international treaty negotiations (see Finding 9 and Finding 18).

[23] KII4; KII5; KII6; KII7.

- It means that 12 countries have roadmaps with another 13 in the pipeline – in the event that a global treaty does materialise, this potentially gives those countries a head start in tackling plastic pollution (see Finding 18).
- It also expands the opportunity for other investors to build on the work of the NPAPs and support roadmap delivery, e.g. Global Environmental Facility (GEF) and the World Bank (see Finding 16).

4.2 Efficiency

Summary: The NPAPs that GPAP has set up are efficient mechanisms to influence systemic change, engaging with multiple stakeholders across the plastics value chain as well as facilitating them to reach a consensus on the scale of the challenge and the change that is needed. While there is scope to improve, especially regarding MEL systems, overall GPAP is an efficient programme.

Finding 5

The multistakeholder participatory platform that the NPAPs provide is an efficient way to influence systemic change and has often injected an energy into the plastics value chain that has created important momentum.

There is a recognition across the sector that isolated policies to address plastic pollution do not work and that system change is needed (see Section 1). Therefore, interventions need consensus from all key stakeholders. This is not easy given the complexity of the value chain and the diversity of stakeholders that have different experiences, skill-sets, viewpoints and interests. Nevertheless, GPAP has succeeded in almost every country to bring these stakeholders together – at times over 100 participants in meetings[24] – and reach a point of consensus. The reputation of WEF and choice of host partner with established trust and networks, have all contributed to this efficiency, supported by the GPAP toolkit that provides important guidance.

As such, all the established NPAPs are on a trajectory to deliver roadmaps, with 12 already completed. Averaging 25 months for delivery, this is within the 28-month timeframe originally expected by GPAP.[25] Of course, exact timeframes vary, as indicated below:[26]

- Our portfolio analysis shows that it took significantly longer for countries of lower economic status and lower Human Development Index scores to complete this process.
- Lower scores in political stability and government effectiveness indicators are also associated with longer duration.
- Election cycles also affect this process, as those countries that went through national elections took longer on average than those that did not (28 months vs 19 months).

In short, delivery performance has been good with outputs achieved on time and mostly on target. Furthermore, given the scale and complexity of the challenge, the delivery of baselines

[24] As was the case in Nigeria.

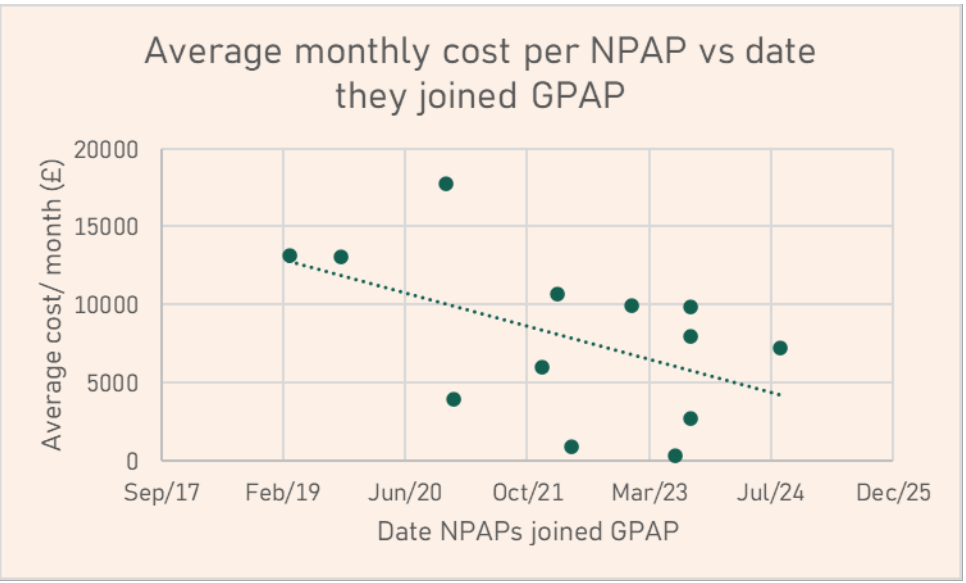
[25] The NPAP toolkit expects the "Prepare" phase to last 6-10 months and the "Build" phase to take 12-18 months; GPAP (2023) *NPAP Playbook*: *A step-by-step guide to creating and Sustaining a National Plastic Action Partnership*

[26] See Annex 1 on Portfolio Analysis for further details.

and scenarios, and multistakeholder validation and consensus-making, NPAP hosts felt that more funding or more time would not have really changed the outcome – the availability and bandwidth of key stakeholders dictated the pace of delivery.

Where costs are concerned, there can be significant variations between countries despite similar results. To some extent, this reflects learning and refinement of the GPAP approach with expected efficiencies. For example, the longer standing NPAPs beginning in 2019 have, as expected, received higher funds as they have been operating the longest but, compared to a country like the Philippines where the NPAP began in 2024, similar results have been achieved for a lower budget and in quicker time. See Textbox 1 for further details on key cost drivers.

Figure 6: Trend in NPAP average costs per month over time



Perhaps most significantly, the NPAPs have - in a relatively short period of time - generated an energy and momentum for change that simultaneously reached across different stakeholders, aligning commitments from the government, private sector and civil society, which is critical for NPAP effectiveness (see Finding 7).

Key characteristics that have contributed to GPAP efficiency are as follows:

- The **credibility and reputation of WEF**, combined by the presence of multi-national companies on the GPAP board, have helped to mobilise membership for the NPAP, including high-level government representatives.[27]
- The **modelling process** has been designed to be as efficient as possible - predicting what data challenges are likely to be incurred at country level and setting up systems for data collation, baselining and scenario planning - simplifying otherwise highly complex exercises.[28]
- Setting up a **metrics advisory group** with a small number of local experts and adopting a "hypothesis-led" approach to validating baselines is an efficient way of reaching a consensus from very complex and uncertain data.[29]
- The **roadmap process** of first presenting the agreed-upon baseline data to NPAP members provides a shared understanding of the current situation and is an important pre-requisite for discussions about the change that is needed - discussions that would be much more difficult and inefficient otherwise.[30]
- **Consistency of the modelling and NPAP processes**, informed by a suite of tools and guidance developed by GPAP, has expedited and streamlined key parts of delivery while consistency across NPAPs has made it easier for central GPAP teams to provide multi-country support simultaneously.[31]
- **The space the NPAPs create** enables stakeholders to understand each other's positions quickly, adjust and collaborate to find solutions, network and build trusted relations – all of which are important elements of systemic change and integrated delivery.
- **The inclusion of the government in NPAPs**, in particular, has expedited decision-making and clarifications, which otherwise can be a drawn-out process. For example, in Nigeria, prior to the NPAP, communicating with the government through written requests could take months; and in Mexico City the government used the NPAP engagement to improve its own decision-making in parallel to the roadmap development.[32]

Of course, there will also be counter-forces that undermine the efficiency of any programme. Changes in NPAP hosts, government and consultancies supporting the NPAPs, as well as staff turnover and political cycles have all had an effect on NPAP efficiency to varying degrees. However, changes in government are also an important opportunity to demonstrate NPAP resilience - if the government changes and the NPAPs remain active and supported by the new government then that is a good sign of NPAP stability and political commitment (as witnessed in Peru and Ghana but not so in Pakistan and Maharashtra state).

[27] Nigeria CS; Philippines CS.

[28] KII8; KII9; the evaluation team's own review of the modelling.

[29] KII9.

[30] Across all Contribution Stories this was found to be the case.

[31] KII8; KII9; KII10.

[32] Nigeria CS; Mexico City CS.

Finding 6 **The structure of the GPAP model with multiple delivery partners and centrally managed small grants mechanism can create layers of administration that may be inefficient and hard to maintain.**

A high proportion of GPAP funding is spent on the GPAP team and consultancies external to the NPAP countries. During the *Prepare* and *Build* phases, these costs have been necessary with the attention of those resources largely focused on in-country benefits - i.e. the set-up of the NPAPs, delivery of the modelling and roadmaps – and additional support to prepare country teams for treaty negotiations. However, looking across the GPAP structure, there are layers of administration associated with GPAP's many partners, all of which come with transactional costs.

The GPAP team is made up of 18 full-time equivalent (FTE) staff to support NPAPs in 25 countries, deliver regional and global convenings, and a small grants programme, absorbing 40% of the overall GPAP budget. Much of the delivery is then through international consultants (30% of the budget) with 19% of the GPAP budget channelled through the NPAP host organisations. As a programme that is largely about convening, facilitating, analysis and research, the majority of these costs are spent on human resources, travel and logistics, as would be expected. Also, while the funding going to NPAPs in-country is only 19%, the reality is that the 30% consultancy budget, the small grants, the NAM tool oversight and quality assurance, and support from at least three GPAP staff based in the regions, means that more of the budget than may be immediately obvious is in direct support of country-based activities. Additional activity to support global convening also benefits NPAP stakeholders (see Finding 9). Furthermore, international consultants are mandated by GPAP to have a local team to ensure culturally sensitive stakeholder engagement and good local knowledge.

It makes sense for some deliverables, such as the NAM tool and modelling, to be delivered by consultants who are well experienced in the complex analysis that these entail. Additionally, host organisations may have staffing limitations which justify out-sourcing delivery at specific times. However, in a small number of cases, consultancies have been replaced following dissatisfaction of their performance with quick and decisive action from GPAP but leading to obvious efficiency implications nonetheless.

As for the administration of the small grants fund portfolio, this required approximately 0.5 FTE staff per year to manage. This equates to a 28% management fee which seems high, especially as the administration did not actually maintain minimal levels of due diligence and accountability – no receipts are submitted by grantees, there are no spot-checks or requests for audited accounts, and all financial and impact reporting is self-reported with no validation conducted on any of the grantees.[33]

Textbox 1: Highlights from "economy" of the VFM analysis

NPAP delivery: On average, £341,173 was provided by GPAP to the NPAPs as grants with the total cost per country at £1,744,916 when factoring in the NAM tool costs and GPAP Global Secretariat. This is the average cost per country and there are significant variations: the NPAP subgrant costs range from £88,927 to £ 1,074,358. Typically the total size of grants delivered to the NPAPs reflects the maturity of activities (i.e. Viet Nam, Indonesia and Ghana have been running the longest and their costs reflect this). Also, the costs vary by country as they reflect local costs, so they are not directly comparable.

[33] Nigeria CS; Philippines CS; KII11.

Average GPAP expenditure per country, 2019-2026	Cost per country	% of total
NPAP (subgrant to host) average cost per country	£341,173	20%
Average NAM tool cost per country	£267,706	15%
Average GPAP wider contribution per country	£1,136,037	65%
Total cost/country (NAM, NPAP, GPAP fixed costs)	£1,744,916	100%

Small grants delivery: The small grants fund totalled £1,085,580.77 with an additional 28% administration costs, with a total of 31 grants delivered to 31 partners (not all of which overlapped with NPAP countries). A review of the 2025/26 projects found the following:

- ***Community awareness and behaviour change projects*** reached over 10,000 people through campaigns, clean-ups, and school programmes, at a cost of £40 per person or less.
- ***The capacity building and skills training projects*** trained around 3,500-4,000 people in recycling, segregation, business management, health & safety, at a cost of £100-114 per person trained. The aim of these projects would be to improve income generation.
- ***The women's empowerment projects*** led to the creation of approximately 20 women-led organisations, bringing together 900 to 1,000 core members. With an investment of £20,000 per organisation or roughly £400-444 per woman these groups have aimed to foster collective bargaining, reduce dependence on middle-layer traders, encourage leadership, and build social capital with lasting, multi-generational benefits.
- ***The physical infrastructure projects*** established 50–60 collection points at a cost of £6,667–8,000 per site, providing permanent infrastructure for daily waste diversion and creating a visible community asset. However, sustainability concerns remain, as ongoing operations and maintenance are essential; some sites may become inactive without continued support.
- ***The waste collection projects*** have diverted more than 60 tonnes of plastic from landfills, at a cost of £6,667 per tonne, which is considerably higher than standard municipal or commercial recycling programmes. While the environmental benefits are clear, the project is in its early stages and currently operates at low volumes, so cost efficiency would likely improve with scale-up.

Finding 7

The roadmap process has generated national consensus regarding the need for change and what that change should look like but the roadmaps stop short of being implementation plans, requiring a further process that is not always clear.

A key purpose of the roadmaps is to find consensus on what the current plastic waste situation is and to find consensus on the type of change that is needed to transform the plastics economy. To a large extent, the roadmaps have achieved this objective and the roadmaps were never intended to be delivery plans. This means that the roadmaps are an early stage of a much longer process and a number of substantial steps are needed to move to delivery. For example, a finance roadmap (see Textbox 2) is needed to cost the interventions, the finance then needs to be found and mobilised, task forces then need to develop delivery plans, and those plans then need to be delivered, monitored and evaluated.

The limitations of the roadmaps are summarised well in a write-up of public consultations in the Philippines:

> *"The consultation revealed that the current NPAP 'Roadmap' is not yet a roadmap in the truest systemic sense. It is a list of action points, valuable and evidence-based, but these function more as levers within a complex system rather than as a coordinated journey toward transformation … In its current form, the roadmap shows what must change but not how change unfolds."*[34]

[34] Kindmind (2025) NPAP Roadmap Public Consultation: Synthesis Report.

Of course, GPAP should not be judged on what it did not set out to do and through the roadmaps and the NPAP processes the programme successfully addresses critical barriers that are pre-requisites for wider system change, providing an important enabling function.

Creating this catalytic effect is key and the momentum generated by the NPAPs needs to be maintained if the investments to date are not to become sunk costs. This requires continued effort to keep NPAP members engaged after they have already contributed much time and effort to the roadmap development and potentially means that those who are able to continue to engage are those that have the resources to do so – i.e. larger private sector stakeholders. This is concerning, as for GPAP and the NPAPs to remain credible they need to assuage criticism that they may be co-opted as vehicles for vested interests and if the public or private sector are seen to dominate – real or perceived – then this will undermine confidence in the programme.[35]

There is already evidence that NPAP members have disengaged, demotivated by task forces that can at times lack a clear purpose,[36] a lack of delivery plan and poor communication post-roadmap[37] and a general fatigue following the involved process of the roadmap development.[38]

To understand how to manage these challenges, lessons can be learnt from Ecuador. This country has identified five focus themes to take forward immediately, led by a single organisation, which then engages stakeholders as needed with NPAP support, keeping the level of effort lean and streamlined.[39] In the Philippines, task forces were well organised and led to collaborations that have delivered pilots even before the roadmap has been completed and the government requested that public consultations be built into the NPAP process with the foresight to expedite the adoption of roadmap targets as government policy.[40]

Textbox 2: Reflections on the financial roadmaps

Purpose: The financial roadmaps are participatory processes led by dedicated task forces. They build on the baseline, scenario analysis and recommendations from the main roadmaps, estimating costs of delivery and laying out financial principles and mechanisms to support implementation. Most financial roadmaps provide a high-level estimation of the capital and operational costs required to achieve systems change and the scale of the current financing gap, but they are not detailed costing exercises. Rather, they identify existing challenges and provide recommendations for how to mobilise funding. They all highlight the need for integration of the informal waste sector, as well as the need for data and tracking systems to measure progress.

Indonesia's Financial Roadmap (2020) estimates that $18 billion is needed up to 2040, identifying financial instruments such as blended finance, EPR revenue and Islamic finance instruments.

Ghana's Financial Roadmap (2022) estimates that $8.1-9.4 billion is needed and considers financial instruments such as green financing and highlights the role of local banks.

[35] Ralston, R. & Taggart, J. (2025) The Trojan Horse of Hybrid Governance: Corporate Power and Global Plastics Governance.

[36] In Indonesia, although five task forces were established in accordance with GPAP guidelines, these structures have gradually become inactive and have not provided sustained strategic direction to NPAP activities. (Indonesia CS). In Viet Nam, three task forces are currently operating but some NPAP members are unaware of the existence, membership, or mandates of the Task Forces (Viet Nam CS).

[37] In Indonesia, the Roadmap is not currently used to shape strategies nor inform decisions and some NPAP members appeared to be unaware of its content (Indonesia CS). In Mexico City, while the groundwork has progressed, there's a gap in terms of communication and shared messaging across sectors leaving members uncertain of what is to happen next with risks that they will disengage from the process (Mexico CS).

[38] In Mexico City, it was mentioned that the length of the process (e.g. to elaborate the Roadmaps) created fatigue among stakeholders and reduced their motivation to engage (Mexico CS).

[39] Ecuador CS.

[40] Philippines CS.

Viet Nam's Financial Roadmap (2025) estimates the funding gap as $5.2-7 billion for the 2025-2030 period. It considers financial mechanisms, such as EPR and green bonds.

Mexico City's Financial Roadmap (pending) does not provide cost estimates and funding needs but includes a timeline, identifies key stakeholders and explores potential financial mechanisms.

The NPAP in Pakistan also prepared a financial roadmap but it was not published as it needed further improvement and hence is not considered here.[41]

Finding 8

The GPAP team has a good understanding of what is happening across the GPAP portfolio and the NPAPs but MEL systems are not robust enough for reliable evidence-informed decision-making, with implications for how well GPAP can monitor progress towards its objectives and adapt.

The GPAP regional advisors and head office team have good relations with the NPAP hosts and global partners and keep abreast of the key activities, challenges and opportunities that present at the national and global level. The MEL systems they have in place help to provide insights of what is happening across the programme, providing a mix of quantitative and qualitative reporting. The best example of this is perhaps the Ghana Plastic Action Initiatives Tracker which is a comprehensive overview of the activities that are ongoing and associated with the GPAP members.[42] This provides useful insights of the kind of work that GPAP is delivering and what it can achieve. However, this tracker appears to have been a one-off and without this kind of reporting being routine across GPAP, it is difficult for GPAP to confidently assess and present its added value overall.

GPAP's current MEL systems appear to be more aligned to Defra objectives than what GPAP can be expected to achieve in the short-term as a convenor. While it is appropriate to have long-term impact indicators, these have tended to dominate the narrative around GPAP's added value. This is problematic as improvements to livelihoods, avoided waste and reductions in mismanaged waste – whilst all relevant indicators - are not contributed to directly by GPAP which typically adds value through indirect support, creating the enabling environment for effective policy development, collaboration and behaviour change. Where relevant outcome indicators exist, they can overly rely on quantitative data, which makes it difficult to convey their significance.

Below we summarise some of the main MEL system issues:

- From the outset, it has not been clear what success looks like for GPAP and impact indicators tend to blur the lines between what GPAP is (a convenor) and what GPAP is not (an implementer). This has led to a set of indicators at the impact level which do not easily trace back to GPAP contribution, with timelines that are far beyond what was originally envisaged as GPAP's duration of engagement.
- There is an almost complete reliance on self-reporting with associated accountability and validation concerns and, at times, a readiness to accept generous figures which can lead to claims that are tenuous.[43]

[41] NPAP Progress,July 2025.xlsx

[42] Ghana NPAP (2022) *Plastic Action Initiative Tracker*

[43] The 2025 GPAP Annual Report claims that "worldwide, NPAPs now drive change for 1 in 5 people" making the assumption that (a) all NPAPs are driving change, even those in Pakistan and Maharashtra State which are deemed to be inactive, and (b) every single citizen in every one of the 25 countries will benefit from that change. According to the GPAP data seen by this evaluation, neither of these assumptions can be evidenced.

- Data quality in-country can be weak and hard to access with particular implications for how GPAP can measure changes in waste management, avoided waste and wider socioeconomic benefits. As this evaluation has found, it is very difficult and time consuming to collate the data that is available and there are few countries where trying to do so is currently viable.
- Measuring achievements such as policy influencing require specific approaches to data collection and analysis, which have not been built into the GPAP MEL systems – meaning key GPAP achievements are not adequately captured.[44]
- At NPAP level, roadmaps often do not include GEDSI-relevant targets and/or targets are not otherwise disaggregated by demographic, which means it is not always possible for GPAP to know the extent to which GPAP has (or has not) contributed to gender and social inclusion.
- The programme's success is highly dependent on financial sustainability and roadmap delivery but there are no indicators to measure this.

The weak evidence base associated with the above is problematic for a number of reasons: (1) GPAP is unable to credibly report what its achievements are, making future funding more difficult to attract; (2) GPAP lacks the evidence base for evidence-informed adaptation, meaning that it may be continuing to invest in ways that are not as efficient or effective as they could be; (3) it is difficult for GPAP to make reliable strategic decisions about which NPAPs to support and how going forward (see Finding 20).

4.3 Effectiveness

Summary: GPAP has combined its global and national convening power to good effect, creating mutually reinforcing components that deepen commitments to change nationally and globally. The NPAP platforms have been particularly effective, providing a pragmatic analysis of the plastics challenge and trusted spaces in which diverse stakeholders can come together and agree upon the solutions needed. This has encouraged public–private partnerships, elevated the voice of informal workers, and contributed to the enabling environment for a transformation of the plastics economy. Government engagement typically has been strong but ultimately there is no clear ownership of the roadmaps creating a risk that momentum will be lost and systemic change slips out of reach.

Finding 9

There is important complementarity between GPAP's focus at the national level and its support to global plastic treaty negotiations. In particular, the roadmap process enables countries to better articulate their national position and have more confidence to engage in international negotiations.

GPAP has played a notable role in supporting NPAP country delegations to engage in global plastics treaty negotiations, preparing them for effective participation, convening representatives from those countries and providing technical advice, such as through the Financing Coordination Working Group (see Textbox 3). Informal workers have also been supported at a global level, enabling them to attend negotiations and bring voices of the most marginalised to global policy decision-making.

This engagement has been complementary to GPAPs support to NPAPs and the programme provides an important two-way feedback mechanism that increases its effectiveness to influence systemic change. Firstly, the NPAPs and associated roadmaps (where they exist)

[44] GPAP annual reports to donors, FY22/23 & FY24/25.

provide the negotiation representatives with a clearer understanding of their own context and the change that they want to see. This is important as it reportedly gives a confidence to the negotiators that they understand well their context and understand what it is they may be signing up to through any agreement. The negotiators are further reassured by the consensus and hence mandate they have from the NPAP members, representing the whole value chain, who concur that change is necessary and have agreed how ambitious that change should be.[45]

At the same time, the country representatives are exposed to other countries that share – or perhaps exceed – their ambition for change, are introduced to new ideas and innovations, new evidence and argument that supports transformative change, and a signal (despite the failure to agree a treaty to date) that their direction of travel is on the right side of global policy trends. In turn, this affirmation of the work that the NPAPs are doing can be communicated back to their members and other parts of government, reassuring those involved that their commitment to change is the right thing to do.[46] In Nigeria, the NPAP has committed to work together at the global scale beyond the plastics treaty, committing to having a unified voice for COP31 focused on climate change.[47]

Textbox 3: GPAP's Global Financing Coordination Working Group

To reduce annual mismanaged plastic volumes by 90% relative to 2019 levels, an estimated US$1.5 trillion in public expenditure and US$15.4 trillion in private sector investments are required between 2025 and 2040. In response to this demand, GPAP convenes the Financing Coordination Working Group which is an informal coalition of organisations - comprising the Circulate Initiative, OECD, UNEP Finance Initiative, World Bank and World Economic Forum. Also present in this coalition is also an informal group of advisors from Member State delegations, including representatives from Ecuador, Ghana, Indonesia, Jamaica, the Netherlands, Norway and the United States of America.

The Group's purpose is to jointly facilitate knowledge exchange, capacity building and collaboration on innovative financing solutions. It conducts research, hosts webinars and in-person events to explore financing options and mechanisms that could facilitate a global plastics agreement.[48]

One respondent considered the Group to be effective at raising awareness of public–private financing models,[49] organising events such as at global plastics treaty negotiations in Busan and Geneva, bringing together more than 100 government and business leaders, providing valuable insights ahead of negotiations. In partnership with the Government of Switzerland, GPAP has also led two successful ministerial visits to industrial reuse facilities, showcasing the tangible outcomes of upstream investment in innovation and infrastructure.[50]

Finding 10

In most cases, the NPAPs have created a well-facilitated, neutral and trusted space for effective dialogue and consensus building. As a result, public–private partnerships have strengthened, informal workers are better valued, and there is greater urgency and commitment across the value chain to reduce plastic pollution and enable a circular economy.

Overall, the NPAPs have been credited with creating spaces where people feel they can speak openly and with a transparency that has been effective at preventing any single group from

[45] Ecuador CS; KII12; KII13; Peru CS.

[46] Ecuador CS; KII12; KII13; Peru CS.

[47] Nigeria CS.

[48] Financing Coordination Group (FCG) 2-Pager.

[49] KII14; KII13.

[50] GPAP (2025) *Unlocking Plastic Action for Inclusion Resilience and Growth: GPAP Annual Report 2025.*

dominating and limiting risks that NPAPs could be co-opted by private sector interests.[51] The process has successfully provided a working baseline that provides a pragmatic appraisal of the national position from which discussions can start. Discussions have then been facilitated well, building trust and leading to a consensus for the change that is needed while improving working relationships that encourage collaboration.

As outlined in a summary report from the Philippines roadmap process, building trust is key:

> *"Trust is the missing currency. The weakest links are coordination, transparency, and follow-through. Public–private–community partnerships fail not from lack of funds, but from lack of shared accountability and trust."*[52]

Trust is a key factor in GPAP's success but there are other key characteristics of GPAPs approach that contribute to its effectiveness. Using research into climate inaction that is relevant to wider environmental issues, Table 2 below reflects on how GPAP has countered the "seven dragons of inaction" to promote change:[53]

Table 2: Seven dragons of inaction – how GPAP responds to barriers to environmental action

Reasons for inaction	How GPAP has responded
***1. Limited cognition*: the human brain responds to immediate risks, not slow onset and long-term risks often associated with environmental concerns and people can be prone to fatalism or optimism bias.**	The baseline modelling and presentation of business-as-usual (BAU) presents the immediate and long-term risks clearly, creating a fear of inaction, while the roadmaps and scenario planning reassure that meaningful change can be achieved. This helps individuals within the plastics value chain promote change within their institutions.
***2. Ideologies*: people believe action to curb environmental damage is not the best option, preferring liberal capitalism or religious salvation.**	The scenario planning shows that action can be powerful, that there are economic opportunities that a circular economy offers and regulation can create a level playing field that is fair. This encourages individuals, policy-makers and businesses to support change.
***3. Sunk costs*: financial investments already made, habits formed and conflicting values can require effort to change, with possible losses.**	The social, economic and environmental costs of inaction outweigh any sunk costs – costs which can be offset by the economic opportunity of greener economies. The NPAPs also bring all voices together transparently, meaning vested interests resistant to change are less able to dominate.
***4. Discredance*: if individuals view others negatively, mistrust policies, doubt an intervention's adequacy, or deny a problem exists, then they are unlikely to listen or act.**	NPAPs provide the space for all stakeholders to develop trusted relations with each other, informed by a common understanding of the problem and evidence-informed modelling that shows collective action can have a meaningful impact.
***5. Perceived risks*: from financial and resource risks (planning and capital outlays might fail) to social risks (a reluctance to be the first-mover).**	Sharing examples of success, building a community of peers, learning from other contexts and highlighting progress already made, can reassure policymakers and businesses that risks are lower than they might have feared and working together can reduce residual risks further.

[51] Ralston, R. & Taggart, J. (2025) The Trojan Horse of Hybrid Governance: Corporate Power and Global Plastics Governance.

[52] Kindmind (2025) Synthesis Report: NPAP Roadmap Public Consultation [Philippines].

[53] Gifford (2011) *The Dragons of Inaction: Psychological barriers that limit climate change mitigation and adaptation*; American Psychologist, May-June.

Reasons for inaction	How GPAP has responded
***6. Comparisons with others*: social norms and identity are powerful and people like to identify with a community, leading to reluctance to change when others don't or a sense of injustice if they are the only ones making sacrifices.**	Bringing many stakeholders together through a transparent NPAP platform shows that no individual is being singled out unfairly and that they are not alone in supporting change and acting differently. The sense of community encourages common purpose and collaboration.
***7. Limited behaviour*: tokenism can lead to adoption of easy but ineffective changes and the "rebound effect" can mean once people have acted they diminish those gains through subsequent actions.**	There is a risk that once roadmaps are at the delivery stage, the easier interventions are prioritised or some are resisted by vested interests. The roadmap is an important reference point to hold all NPAP members to the ambition of system-wide change that was consented to.

These characteristics of the multistakeholder platforms have enabled all voices to be heard. For example, in Ecuador, the smaller number of first-movers in the upstream space felt that their voices were elevated and heard, and appreciated the opportunity to showcase their ideas and the affirmation that this received.[54] Public–private relations were improved, with the government better able to understand the position of the private sector (see Finding 13) and task forces were created to support existing government policy such as the EPRs (see Finding 11 and Finding 12). Similarly, informal workers felt heard and valued, appreciative of the opportunity to meet with government officials and large corporations (with the exception of the Mexico City NPAP where informal workers were deliberately excluded and the Indonesia NPAP where they were overlooked).[55] GPAP-commissioned research and knowledge products have played an important role and helped to influence a sector that in the past has overlooked such concerns.[56] See Textbox 4 and Annex 6 for further details.

To manage the variety of voices and interests, especially where traditionally more powerful stakeholders can also be the most numerous within the NPAPs (see Finding 1), requires skilful facilitation and management. Perhaps the best example of this management is in Ecuador, where the World Wide Fund for Nature (WWF) as the NPAP host used its experience of managing dialogues, such as the protection of Indigenous rights and exploitation of natural resources, to inform its approach to the NPAP. Supported by internal guidelines of how to manage multi-stakeholder processes, it abided by a set of principles that ensured all voices were heard.[57]

GPAP's inclusive approach and facilitation skill has led to relatively balanced roadmaps overall. The portfolio analysis shows that when all roadmap interventions are organised by type, there is an even spread across upstream and downstream interventions (8% for reuse, 12% for recycling, 12% for collection, 11% for infrastructure, 13% for product design and 34% for policy which can be cross-cutting across all types). While this is a crude analysis and does not mean the balance of interventions is right, it does support the view that no single part of the plastics value chain has dominated significantly over others.

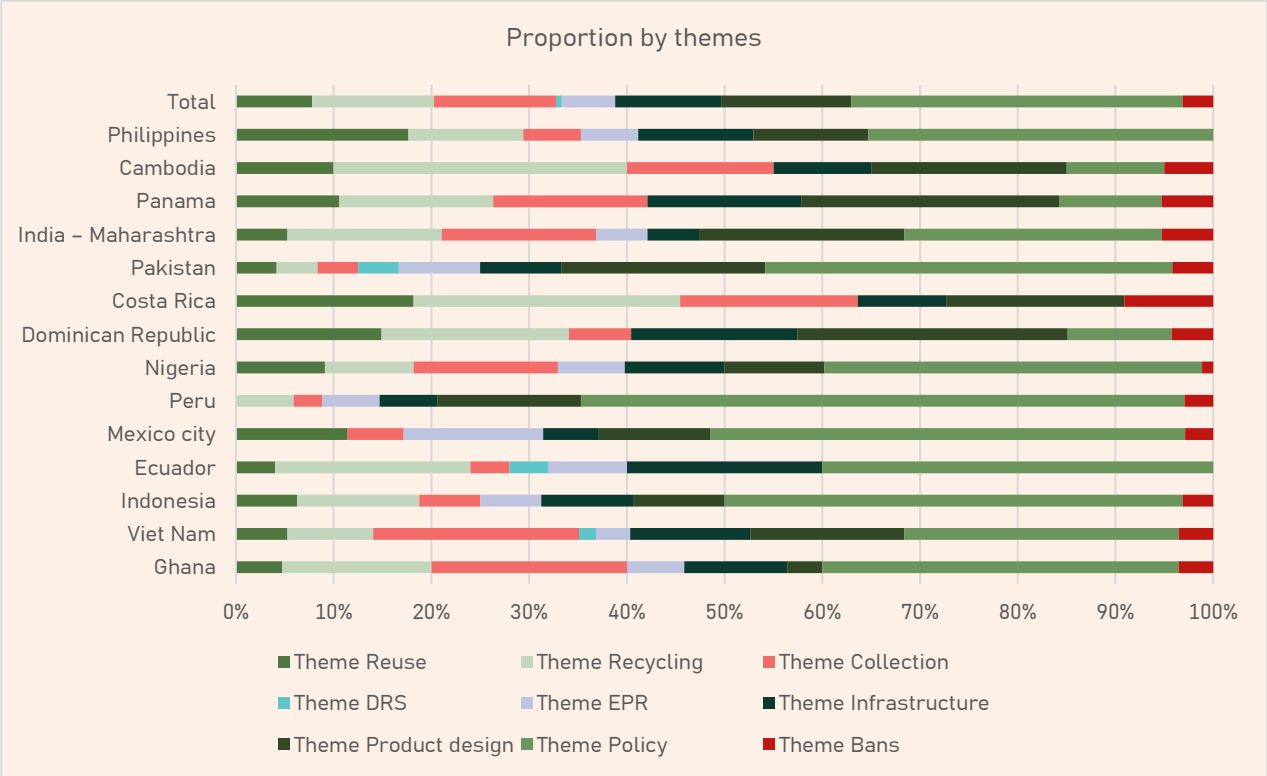
[54] Ecuador CS.

[55] With the exception of Mexico City CS and Indonesia CS, all contribution stories highlighted the opportunity for informal workers to inform discussions within the NPAPs.

[56] Feedback from one of the evaluation's data collection partners.

[57] Ecuador CS.

Figure 7: Roadmap interventions organised by theme



Textbox 4: A summary of the GESI analysis conducted during this evaluation

The importance of context analysis and GESI-sensitivity is highlighted through the informal worker surveys which found very different demographic compositions of informal workers across the three countries: in Viet Nam, women clearly predominate (86.5%), the population is notably older (50.5% aged 46–60 and 31.5% over 60), and educational levels are higher (78.5% secondary and higher education). In addition, only 54.2% consider plastic collection to be their main source of income, which suggests greater economic diversification or complementarity with other activities. By contrast, Ghana shows greater presence of men (58.8%), the population is much younger (35.3% aged 18–30 and 37.6% aged 31–45), and almost all respondents (95.9%) are migrants, with plastic collection being the main source of income for 93.7% of them. Ecuador falls in an intermediate position regarding gender (69% women) but stands out for having the highest percentage with only primary education (48.2%) and the highest prevalence of disability (8.6%). Gendered variations also occur when it comes to confidence in negotiating prices and show that gender significantly impacts the likelihood of earning a higher income (women are less likely to belong to the higher income group). In Viet Nam, a sector dominated by older women, men state a higher confidence in negotiating prices than women; similar differences appear in Ghana; in Ecuador, no significant differences between the genders were found.

The following sections provide highlights from this evaluation's GESI analysis of GPAP and hence the extent to which it can respond to the kind of contextual variations described above.

The extent and quality of contextual analysis on GESI varied across NPAPs, influencing how effectively national roadmaps and engagement strategies reflected the needs and priorities of informal workers and marginalised groups. Where such analysis was systematic and explicitly linked to planning processes, it informed strategic direction and stakeholder engagement.

NPAPs adopted differing levels of ambition in addressing gender and social inequalities and varied in the extent to which GESI considerations were embedded within formal governance structures. Across the portfolio, ambition was generally moderate, with inclusion more often focused on participation within the NPAP process than an opportunity to address structural inequalities. For example, little

attention is paid to linking plastics governance to Indigenous rights, environmental justice, labour rights, social protection or bargaining power.[58]

A review of the published roadmaps indicates that the positioning of GESI within the overall system-change architecture varies significantly across countries. In several roadmaps, inclusion is framed as a cross-cutting principle or enabling condition, rather than embedded directly within the core upstream and downstream system interventions. By contrast, Ecuador and Peru integrate informal worker inclusion and social protection considerations more directly into the interventions, linking circular economy objectives with formalisation pathways, working conditions, and recognition within waste systems.[59] The Dominican Republic roadmap goes further in articulating a "just transition", signalling recognition that circularity and equity must advance together[60]

Where participation in NPAPs relied largely on voluntary or unfunded engagement, inequalities in voice and influence persisted; participation processes were strongest where practical barriers were explicitly addressed. The approach taken across countries varied and structural barriers to engagement were not always addressed, limiting engagement of the most vulnerable. However, in Ecuador, community-level interventions provided childcare, transport and tailored facilitation, enabling Indigenous women and waste pickers to engage consistently in consultations and project design.[61] In Peru, structured working groups and formal recognition of recycler associations created regular and predictable entry points for participation.[62]

Financing frameworks rarely incorporate clear equity safeguards or targeted inclusion mechanisms, increasing the risk that system-change investments reproduce existing inequalities rather than reduce them. Most roadmaps do not specify how financial flows will reach informal workers or marginalised groups, nor how safeguards will be applied to prevent market consolidation that displaces vulnerable actors. Where EPR schemes or formalisation pathways are introduced without explicit protections, increased regulatory compliance and capital requirements are likely to favour larger formal enterprises, potentially marginalising small-scale collectors and women-led micro-enterprises.

Across the NPAP portfolio, monitoring frameworks prioritise material and technical performance while largely neglecting measurable commitments on GESI. This imbalance limits accountability for equitable outcomes and weakens the ability to assess whether system-change benefits are being fairly distributed.

In summary, GESI ambition was generally moderate: good on inclusion and participation within NPAP processes but missing opportunities to take this further and address structural inequalities. Roadmaps and processes that stand out as being particularly progressive are those from Ecuador, Peru and the Dominican Republic.

Finding 11

In parallel to the roadmap development, collaborations have been instigated through the NPAP platforms that demonstrate a desire among NPAP stakeholders to work differently and are early signs that GPAP can stimulate operational change.

Ultimately, what the NPAP process has been able to do is create a persuasive narrative that has generated a shared urgency for change, brought together a strategic set of stakeholders who can catalyse that change, and used participatory processes to generate consensus of what that change should look like. Aligning this intent at the same time across all stakeholders is critical to success. If this alignment is not there – if the government is not on board or the private sector is not on board – then change is unlikely to happen. GPAP has, therefore, made a valuable contribution to enabling the transformation of the plastics

[58] Ecuador CS.

[59] NPAP Ecuador (2024) Roadmap for Action on Plastics in Ecuador; NPAP Peru (2025) Hoja de Ruta de Accion para Reducir la Contaminacion por Plasticos en el Peru al 2024.

[60] NPAP Dominican Republic (2025) Hoja de Ruta de Accion sobre los Plasticos en la Republica Dominicana.

[61] Ecuador CS.

[62] Peru CS.

economy in the eight countries considered for this evaluation and can be expected to have influenced other countries also. See Figure 8 for illustrative examples of the kind of interventions and collaborations that have emerged from the NPAPs.

This willingness to work differently and the networking opportunities that the NPAPs facilitate have come together to deliver a range of important collaborations, leading to important policy developments which have potentially significant implications. For example, a common focus for these collaborations has been on improving the effectiveness of EPR schemes and NPAPs have mobilised dedicated task forces to support public–private collaborations that seek to improve EPR design and delivery.[63] Another focus for NPAP task forces has been metrics. The paucity and quality of data is a key challenge for all NPAP countries as mentioned in Finding 14 and the task force in Nigeria has maintained their attention on harmonisation and standardisation of metrics.[64] Similarly, NPAP task forces focused on upstream issues have identified hygiene regulations as a hindrance to reuse and refill systems and are working not just with the environment departments but also departments responsible for health, food and beverages.[65]

See Figure 8 for further examples.

[63] Nigeria CS; Philippines CS; Ghana CS.

[64] Nigeria CS.

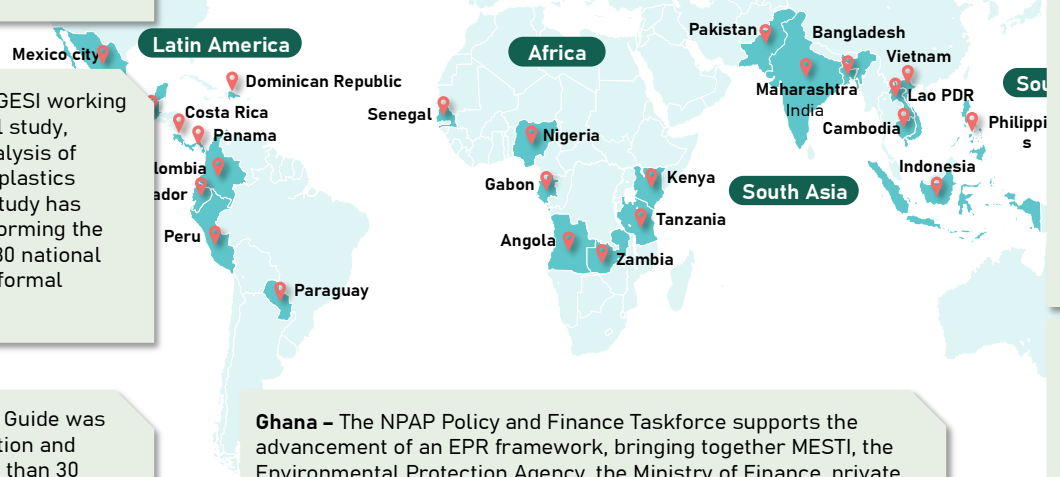
[65] Peru CS; Philippines CS.

Figure 8: Examples of collaborations between government, private sector and civil society resulting from NPAPs across the eight case study countries.

Ecuador: The NPAP supported a study to inform a new EPR scheme, funded by 10 private-sector actors, ensuring the study was inclusive, transparent, and grounded in shared evidence. The NPAP convened recyclers, producers, unions, packaging suppliers, government ministries, academics, and informal waste workers to contribute giving the EPR study greater legitimacy while alignment with the Ecuador Roadmap elevated the EPR scheme as a national priority action to tackle plastic pollution. The government has committed to adopting the EPR scheme as the basis for a future EPR law once piloted.

Nigeria: Informal pickersfedback directly to producers that labels, bottle caps and colouring undermine recycling; recyclers, producers and government officials were able to explore the problem of exporting most rPET feedstock to Europe and arrangements to keep more in Nigeria, e.g. paying upfront or guaranteeing purchase of 20% of feedstock materials.
Nigeria CS

Indonesia – NPAP connected Enviu, a recipient of a GPAP small biodiversity grant, with the Coordinating Ministry of Food Affairs, piloted a reuse-focused project within a government platform; the NPAP connected the Ministry of Education with industry to collaborate on an early childhood curriculum for plastic waste management; NPAP facilitated Dow's involvement in a Ministry of Marine Affairs and Fisheries programme to reduce marine plastic pollution.



The Philippines – Two recycling companies with different polymer recycling capabilities agreed to collaborate and exchange waste; Greenpeace, Unilever and local authorities are exploring joint refill-reuse projects; from the *Upstream Task Force* a refill-reuse pilot to reduce sachets is funded by the private sector, a social enterprise, GEF (via Plastic Reboot) and co-financing from local government.
Philippine CS

Peru – A dedicated multistakeholder GESI working group supported an inclusive national study, providing the first comprehensive analysis of gender and social inclusion in Peru's plastics sector, informing the Roadmap. The study has been presented at several events, informing the MINAM's development of the 2025-2030 national strategy for integrating formal and informal recyclers into the waste value chain.

Mexico City – A Compostable Plastics Guide was developed by the PAP-CDMX's Innovation and Technology Taskforce, involving more than 30 organisations across government, academia, and the private sector. The guide is informing a separate government-led working group to submit to Parliament a modification that exempts compostable bags from existing plastic bag regulations.

Ghana – The NPAP Policy and Finance Taskforce supports the advancement of an EPR framework, bringing together MESTI, the Environmental Protection Agency, the Ministry of Finance, private sector actors, recyclers, the World Bank, UNIDO, and informal sector. The process informed rPET standards and EPR design. In parallel, NPAP's Inclusion Task Force promotes the recognition of waste pickers, including guidance on forming cooperatives and participation in brand audits, gender assessments and strengthening their visibility within national discussions.

Viet Nam – The Indo-Pacific Plastics Innovation Network (IPPIN) was able to secure the participation of government representatives in its Demo Day through connections facilitated by NPAP. NPAP has also partnered with several organisations to support interventions and campaigns, for example, collaboration with VECOM for a digital business contest, collaboration with UNDP on the Ending Plastic Pollution Innovation Challenge (EPPIC) and the Quy Nhon City Club project.

Finding 12

The effectiveness of the small grants mechanism – primarily used to support informal workers – is limited by bureaucratic constraints and no real strategy to maximise added value. This means that, while there have been important benefits from the grants, they have not been as effective as they could have been.

The small grants mechanism to support informal workers was initially set up in response to Covid pandemic restrictions that posed particular risks for informal workers and in total 20,413 people have been supported by GPAP's small grants.[66] As the pandemic subsided, the small grants were continued, largely providing training (business, finance, health & safety), personal-protective equipment, access to health insurance and support to informal worker associations – all are valid support as indicated by the informal worker survey which, for example, found links between positive working conditions, price negotiations and income, and being a member of an association (see Finding 17). The focus of the small grants programme is, therefore, well-intended and the need for support outstrips supply when considering the huge number of informal workers globally, with an estimated 10,000 informal workers in the city of Hanoi alone[67] and 19-24 million globally.[68]

This suggests that, in principle, GPAP funded projects are focused on the right support. In practice, GPAP's ability to affect change is not so assured as a review of the small grant reports and interviews with project partners find a number of shortcomings: (a) the duration of delivery (averaging around seven months) is cited as too short for any meaningful change;[69] (b) project partners complained that there was a lack of follow-on for additional funding to scale up successful projects (none of the 31 partners have been funded more than once); and (c) while amplification may be expected from the NPAP platforms, GPAP, in some cases, deliberately excludes the NPAP host organisations from grant decision-making.[70]

It is clear that GPAP has learnt lessons, evolving its strategy over time as it shifted from its original response to support informal workers during the Covid pandemic to a post-Covid setting. While this is positive, the number of informal workers that have been supported by GPAP is a relatively small proportion of the informal worker population across the 25 countries. It is also an area that multi-nationals appear to be willing to support and private sector funded projects appear to be comparable in terms of design and reach.[71] This is substantiated by the informal worker survey which found that some countries already receive good levels of support similar to what GPAP provides: 75.1% of informal workers surveyed in Ghana receive financial training, suggesting alternatives exist and could potentially be leveraged elsewhere (the survey in Viet Nam, by contrast, found only 1% had received financial training). Given that GPAP's unique selling point as a convenor is a harder activity for GPAP to fundraise for,[72] there is an important opportunity-cost associated with the small grants fund which is hard to justify given the efficiency and effectiveness concerns raised in this evaluation (also see Finding 6).

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[66] GPAP (2025) *Unlocking Plastic Action for Inclusion Resilience and Growth: GPAP Annual Report 2025.*

[67] https://www.weforum.org/stories/2025/08/green-warriors-viet-nams-informal-waste-workers/

[68] https://faircircularity.org/resources/living-income-study/

[69] Review of 2025-2026 project reports submitted to GPAP.

[70] KII11; Philippines CS.

[71] Through their collaboration 'The Plastic Reborn', Unilever has provided 3,000 informal waste workers with protective gear, uniforms and other monthly necessities since 2021.

[72] Comment made by GPAP senior management during this evaluation's emerging findings presentation (March 2026).

Finding 13 **The engagement of the government has been an important aspect of the NPAP's effectiveness while government policymakers and regulators have valued the perspectives of the NPAP community to inform their decision-making.**

A key indicator of success for GPAP is that the NPAPs have the close engagement of the government, with a minister chairing the group overall. Indeed, the roadmaps are intended to be supportive of government policy. This has increased the credibility of the NPAPs and, in most cases, increased the buy-in of the government to promote change. As outlined in Finding 5, the involvement of the government has increased the efficiency of consensus-making but it has also strengthened the credibility of the NPAP process while raising the awareness of the government and informing its decision-making. In some cases, the involvement of multiple ministries, departments and agencies has been particularly effective and in line with the systemic change and holistic response that a transformation of the plastics economy requires (see Finding 10 and Finding 11).

In parallel to the roadmap development, governments have often been working to strengthen its agenda and ready the policy landscape for roadmap delivery. This has been the case in particular in: (a) Ecuador which has taken on board many of the targets set out in the roadmap as policy; and (b) in the Philippines where the government asked the roadmap process to include public consultations as these are necessary for passing any policy. However, in the Philippines case, there was uncertainty as to whether the roadmap was sufficiently detailed to serve this purpose.[73]

The focus of the task forces can also be indicative of what the government is prioritising and how it sees the NPAPs adding value. In the case of the Philippines, the government had already tasked municipal authorities with assessing the characteristics of their waste and the scourge of sachets across the country was an established issue. It is indicative of the government's interest that one of the first task forces created – even before the roadmap was completed - was on upstream responses to flexible plastics.[74]

As might be expected, the reaction and enthusiasm of governments varies across countries with notable disengagement in Pakistan and Maharashtra State where the NPAP process has largely become inactive due to political changes and deprioritisation of the issue.[75] There is also the inherent challenge of good governance and delivery of policy that besets any government and when working with lower- and middle-income countries, government capacity to engage and deliver can be particularly stretched. This is not helped by administrative limitations on WEF that prohibit it from covering the travel costs of government officials.[76] In some countries, there are also concerns about lobbying and conflicts of interest, which have the potential to undermine policies that change the status quo as the roadmaps are intended to do. In all these contexts, the transparency of the roadmap process – which often highlights the measures that are already in place but have not yet been delivered – is important to maintain pressure on the government to act in the best interests of its citizens.

A final point on government engagement, is the inclusion of sub-national governments. Often, it is state level and municipalities who are responsible for much of the waste management and regulations that the roadmaps target. However, with the exception of the NPAPs in Maharashtra State and Mexico City, the NPAP engagement has tended to focus on central

[73] Philippines CS.

[74] Philippines CS.

[75] Discussions during inception with Defra and WEF teams.

[76] KII15; KII11.

government. There are signs that this is changing as NPAPs shift their attention from planning to delivery.[77]

In summary, the level of government engagement in NPAPs varies, but is generally strong. How this commitment is maintained remains to be seen: the financial roadmaps, completed in only three countries, are bringing the reality of system change into full view and time will tell how well the roadmaps translate into delivery. There is a risk that as the multistakeholder fervour of the roadmap process fades, the economic reality of change sets in and, with potentially less active NPAPs to maintain a transparent process (see Finding 19), vested interests and entrenched economic incentives of the status quo may undermine some of the system-wide change that the roadmaps expect.

Finding 14 **The baselining and modelling have enabled and promoted evidence-informed decision-making and encouraged more to be done nationally to improve data collection, collation and analysis going forward.**

As outlined in Finding 2, the development of the NAM tool has led to a consistent approach to baselining and scenario modelling that is a pre-requisite for evidence-informed consensus building. The provision of this data and analysis is an important aspect of GPAP's added value, helping NPAP countries to overcome a common hindrance to improving waste management and reducing plastic production.

To provide this analysis is not an easy task. Not only is the task itself highly complex, but there are also significant challenges with the data in every country - quantity, quality, consistency, accessibility – that make the task even harder. Accompanying the NAM tool, GPAP has provided substantial technical support, quality assurance and a strong partnership with Systemiq to make the most of the data available.[78]

The process of baselining and scenario planning has been important to encourage a culture of evidence-informed decision-making within the sector, with NPAPs setting up Metrics Advisory Groups from the outset to support the initial analysis that informs the roadmaps. In some cases, these groups have continued to function and prioritise the improvement of data collection, collation and analysis, driving forward harmonisation and standardisation at the national and sub-national level. For example, in Nigeria, a series of NPAP-led dialogues at the end of 2025 saw further progress towards a public–private co-designed framework to standardise data collection which will feed into the government's ongoing development of a Plastic Registry.[79]

While progress will take time, data and analysis should become more accurate, ironing out challenges and weaknesses of the NAM tool, such as connecting more strongly to government frameworks that are already in place and accounting for commitments that may already have been made. There is also a need to extend the data collection, analysis and scenario planning beyond municipal solid waste, which is the focus of GPAP but only makes up a proportion of waste nationally.[80] The exclusion of other forms of waste could become misleading, where improvements in municipal solid waste could mask the need for simultaneous action in other parts of the waste management sector.

[77] Nigeria CS; Philippines CS.

[78] KII8; KII9.

[79] Nigeria CS.

[80] The Ecuador NPAP roadmap states that municipal solid waste accounts for more than 64% of global plastic use in all sectors.

Finding 15

GPAP and the NPAPs are seen as an important part of supporting the transition to a circular plastics economy and there is an interest across the value chain in all of the case study countries for them to continue to function. However, there is uncertainty about who is responsible for maintaining momentum and without active NPAPs, there is a risk that the focus on system change starts to wane.

GPAP has done well to take a theoretical approach outlined in the *Breaking the Plastic Wave* report and roll that out to 25 countries.[81] This approach has been important to bring a balance to system-wide thinking that, in the past, has tended to focus on recycling as the solution. Supported by 25 NPAPs, the GPAP network has become an important part of the global and national plastics landscape; and had a global treaty been agreed as hoped in 2025, the significance of these NPAPs would likely be much higher. Layered on top of this, GPAP's focus on gender and inclusion has led to an important step-change in how more vulnerable groups are represented in value chains (see Textbox 4).

As such, the NPAPs provide an essential function for transforming the plastics economy that did not exist before. It stands to reason, therefore, that weakening or removing that essential function could precipitate a return to the status quo, whereby entrenched economic incentives and power dynamics dominate. The result could be individual roadmap interventions being chosen for economic or political expediency at the cost of a coordinated response across the whole value chain.[82] The main risks to this happening are as follows:

- A reduction in NPAP time, energy and resources reduces NPAP activity and focus, limiting the role it can play to push forward system-wide change (see Finding 19).
- Attrition of NPAP members occurs as representatives struggle to spare the time and resources needed for long-term engagement, leaving behind those members with the most resources, potentially favouring established economic structures and power dynamics.[83]
- A lack of ownership of the roadmap and defined mandate and plan to move it forward leads the roadmap to languish.

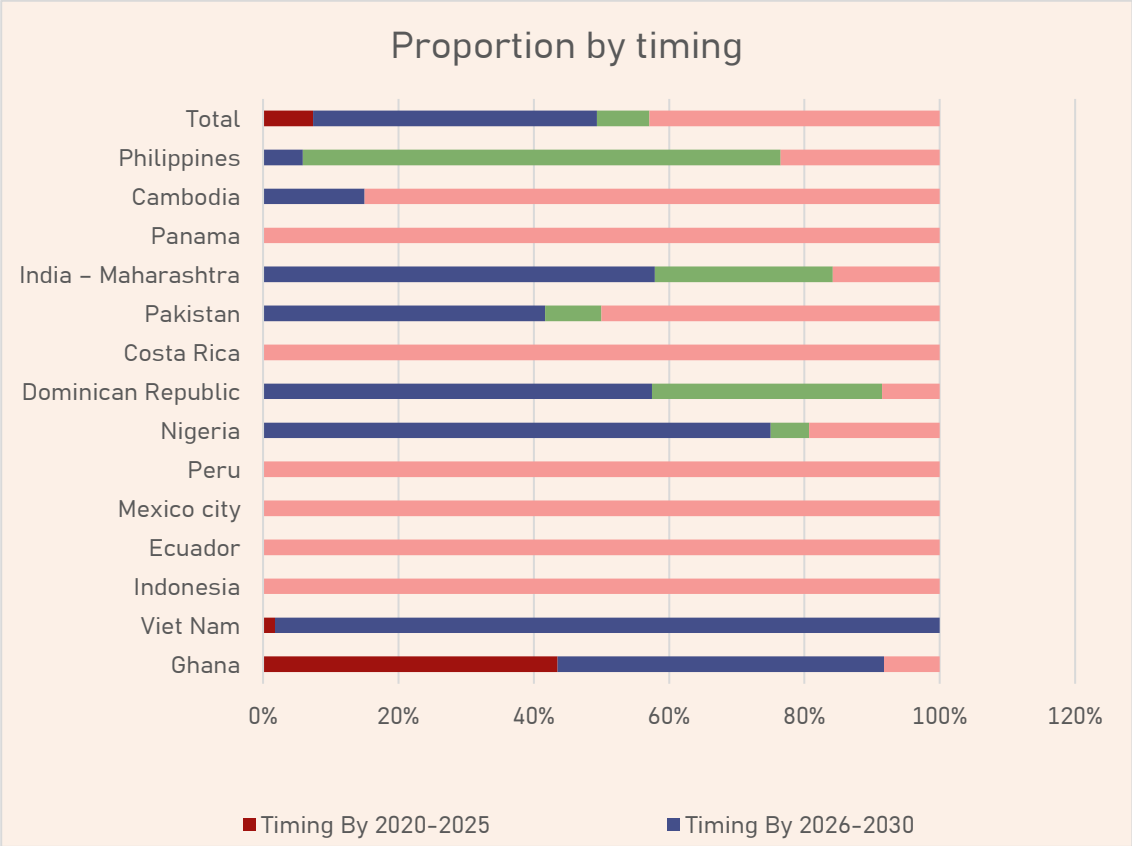
Regarding the latter point, it is often not clear who is actually responsible for driving forward the roadmap: in theory, all NPAP members own the roadmap; in reality that can mean no-one does. Without a clear plan of action, there is a risk that the roadmaps will start to drift which – in many cases – are already only loosely bound by targets and deadlines (see Figure 9 below which shows how many interventions have already been pushed into distant time frames).

[81] Pew Charitable Trusts (2020) *Breaking the Plastics Wave.*

[82] During a "Solutions Day" convened globally by GPAP, a key concern of governments was budget pressures and rural-infrastructure, suggesting that existing fiscal constraints are very real. This could mean an over-reliance on the private sector to finance change. Source: GPAP (2026) *Solutions Day: High-level summary for internal purposes with attribution.*

[83] There is evidence of attrition in Nigeria.

Figure 9: Roadmap interventions organised by time frame



Finding 16 **There is limited evidence to date of the NPAPs generating new investments.**

As outlined in the GPAP ToC, there were a number of ways in which GPAP was expected to leverage funding to support a transformation of the plastics economy and a key aspect of this is the development of financial roadmaps to complement the main roadmaps (see Textbox 3). In parallel, GPAP requires the NPAPs to map any investments made that are associated with NPAP members, with over £1.1 billion reported to GPAP.[84] However, the NPAP in Indonesia (which reported 99.7% of the investments to GPAP) questioned the relevance of submitting this data on the grounds that NPAP additionality is unclear and actual delivery of these investments is unverified.[85] This does not mean that these numbers are inaccurate but, without verification, they need to be used cautiously.

Nevertheless, there are examples of pilot schemes and networking opportunities directly linked to the NPAPs as outlined in Finding 11 which have sourced funding from outside GPAP and could lead to future investments. More broadly, there is evidence that the roadmap process has supported an enabling environment for the circular economy that gives confidence to investors and entrepreneurs. There are also examples of NPAP members and initiatives docking into other related programmes, in particular the Plastic Reboot programme led by WWF and UNEP and funded by GEF. While the Reboot programme is not dependent on GPAP and operates in countries where GPAP does not, the programmes are complementary and Reboot is one of the most viable sources of ongoing funding that NPAP members can tap

[84] Consolidated Financial Commitments from NPAP Members (excel file shared by GPAP, 2025).

[85] Indonesia CS.

into.[86] In the Philippines, a summary report for the NPAP referred to a government announcement of a planned $1 billion loan from the World Bank to provide performance based grants to establish effective municipal waste management systems, including functional recycling facilities. However, the status of this loan and the role of the NPAP in facilitating the loan agreement is unclear.[87]

It should also be noted that any judgement of GPAP's ability to generate investments needs to be considered within a context where funding envelopes for similar initiatives are shrinking globally. Furthermore, had a global plastics treaty been agreed and all countries had legally binding commitments, then the availability of funding to deliver the roadmaps would likely be very different to what it is now.

4.4 Impact

Summary: Significant improvements to waste management and waste avoidance are feasible and have occurred in some of the NPAP countries. This has benefits for livelihoods associated with the circular economy, and economic and health benefits linked to reductions in pollution. GPAP has contributed to the enabling environment that makes this possible, providing good VFM and returns on investment. At the same time, GPAP's convening of a community of 25 countries is significant for advancing a global plastics treaty, the success of which would potentially have profound implications for the added value of GPAP and its network of NPAPs.

Finding 17

Evidence suggests that GPAP has contributed to improvements in waste management and waste avoidance, meeting system-change scenario targets set by GPAP in Ghana and Ecuador but missing them in Indonesia and Viet Nam.

At the impact level, GPAP is expected to contribute to reductions in plastic pollution through reducing production of plastic waste and waste mismanagement with corresponding benefits for the environment and improvements in quality-of-life. This evaluation has conducted modelling exercises to assess the extent that GPAP has achieved impact-level change. The specific indicators used are:

- GPAP impact indicator #1 (KPI #5) – Solid waste and pollution avoided
- GPAP impact indicator #2 (KPI #7) – People benefiting from strengthened or new livelihoods

There is then an additional indicator included in the Defra Business Case for GPAP which we also considered:

- Defra Business Case Impact Indicator - Marine mismanaged plastic waste reductions

Due to data paucity in many countries plus the relatively short time that many NPAPs have had to influence impact-level change, the evaluation deemed it feasible to attempt modelling in

[86] KII16; review of GPAP Sustain Strategies.

[87] NPAP Philippines (2025) From Roadmap to Reality: Collective Action for a Circular Economy; Public Consultation: National Action Roadmap Draft.

only four countries: Ghana, Indonesia, Ecuador and Viet Nam. See Annex 5 for a summary of the modelling methodology.

Based on our modelling of the data that is available in these four countries, it is likely that GPAP has contributed to significant progress towards its targets. In turn, this has led to positive returns on investment overall. However, it should be noted that it is challenging to separate GPAP's contribution – i.e. the extent to which change would have happened without GPAP's engagement. Based on our previous findings in this report, GPAP has influenced the enabling environment that makes these changes possible and hence can be considered to have made a contribution to any commitments and interventions associated with NPAP members, which includes the government in each country. With this in mind, the GPAP impact indicators are discussed in detail below.

Impact on plastic pollution

Considering GPAP impact indicator #1 and the Defra Business Case indicator on marine waste management, the four countries that were modelled have made significant contributions towards GPAP's 2026 targets. For example, the target for avoided and better managed waste across all 25 countries by 2025 was 5,000,000 tonnes with the four countries modelled contributing 25% of that target (see Table 3). This is mostly through better managed waste rather than avoided waste.

Table 3: Contribution to GPAP 2026 targets from the four countries that could be modelled

Country	Avoided waste (tonnes)	Mismanaged solid plastic waste better managed (tonnes)	Marine plastic waste reduction (tonnes)
Actual total: Ecuador, Indonesia, Ghana, Viet Nam combined	48,561	1,204,562	4,120,485
FY2025 target: All GPAP countries	5,000,000 (for avoided and better managed combined)		17,000,000
% of FY2025 target: All GPAP countries	25%		24%

This is a positive contribution, but caution needs to be applied when considering how this success may translate to countries that have not been modelled because, when looking at the country-specific modelling, the picture is mixed. At the most positive end, Ghana achieves an estimated 513,050 tonnes of better managed waste and 14,811 tonnes of avoided waste. It exceeds its recycling targets by 400% but has only met 8.6% of its 2025 system-change scenario (SCS) target for avoided plastic waste with limited upstream progress. Ecuador by contrast has achieved 50.8% of its SCS target for avoided plastic waste and 91.3% of its 2025 SCS target for better managed waste.

Indonesia has achieved 273,067 tonnes of better managed waste but this has been vastly overwhelmed by increases in plastic waste generated.[88] This means in real terms, plastic waste has increased in Indonesia by 3,012,558 tonnes since the 2017 baseline – exceeding the

[88] 50 new dumpsites that were built by the government have been excluded from the modelling as, not being sanitary/controlled landfills, they are still considered mismanaged waste.

NPAP BAU 2025 scenario. As for Viet Nam, only 2.2% progress has been made towards the avoided waste SCS target and 16.9% for better managed waste.

See Table 4, Table 5, Table 6 and Table 7 for the modelling results by country.

The informal worker survey reveals country-level variations in plastic collection which provides further insights of trends in the circular economy. For example, informal workers in Ecuador and Ghana have perceived higher but still moderate improvements in the supply of plastics (over 40% in Ecuador and 70% in Ghana stated an increase) while Viet Nam responses move in the opposite direction, towards unchanged or slightly lower supply during the past year.

When looking at different plastic types, polyethylene terephthalate (PET) collection is near-universal across all three countries (94–96% of informal workers collect PET), but Ecuador collects more types of plastics on average (3.7 compared to 3 in Viet Nam and 3.2 in Ghana). Viet Nam stands out for high-density polyethylene (84.5%). The share of plastics within total waste collected is highest in Ghana, representing for most respondents over half of total waste, while Viet Nam and Ecuador collect much more paper.

The modelling and the survey results show that, overall, there are positive trends in GPAP impact indicator #1 and the marine indicator from Defra's Business Case. GPAP will have made a contribution to these trends. However, country-specific variations are huge and the insights provided above show that there is still much work to be done on reducing plastic production. GPAP's focus on upstream interventions, therefore, is a push in the right direction.

Impact on quality-of-life

For the quality-of-life impact indicator, we estimate that 11,346 jobs have been created and 12,717 have been strengthened in the four countries modelled, mostly through expanded recycling, refuse-derived fuel preparation and disposal sites. Although it is not ideal that job creation appears centred primarily on downstream interventions, these numbers should be viewed against a backdrop of improved working conditions for informal workers as found in the informal worker surveys conducted in Ecuador, Ghana and Viet Nam.

The surveys show that changes in working conditions are perceived more positively in Ghana and Viet Nam than in Ecuador, where they point towards a worsening picture. In terms of public attitudes towards informal workers, they are moderately positive in all three countries. Confidence to negotiate prices and price evolution are perceived much more positively in Ghana (76% reporting a price increase), and to a lesser extent in Ecuador, while negative perceptions predominate in Viet Nam (42% reporting a price decrease), compounding the wider reduction in demand for plastic mentioned above. This points to relative market deterioration in Viet Nam and improvement or at least higher market stability in both Ecuador and Ghana. This has, potentially, influenced dependencies on plastic collection where plastics make up ~92–94.5% of total informal worker income in Ecuador and Ghana, but only ~76.8% in Viet Nam.

There are also variations in association membership between the countries which influence quality-of-life of informal workers. In Ghana, membership is extremely high (93.7%) and high in Ecuador (66.5%), but almost non-existent in Viet Nam (5%). This matters, as association membership seems to be a key driver of improving living and working conditions: in Ghana, via health and safety training, access to healthcare, and financial training; and in Ecuador, community belonging and support, followed by health and safety training, and provision of equipment.

The modelling and survey results show that there are positive trends in GPAP impact indicator #2. GPAP will have made a positive contribution to this through a combination of deepening public and private sector commitments to the circular economy with broader economic, environmental and health benefits to society as well as raising awareness of the challenges that informal workers can face and elevating their voices among key decision-makers through the NPAPs.

The tables below summarise the key impact-level achievements across each of the four modelled countries and include projections towards GPAP's 2030 and 2040 targets. A full explanation of the modelling can be found in Annex 5 and below are some methodological highlights relevant to the tables:

- KPI#5 and KPI#7 are aligned to the timeframe that an NPAP has existed in that country (from the baseline year in the roadmap) and includes interventions associated with GPAP/NPAP members e.g. Task Force members, Steering Board Members and funded informal waste sector projects etc. For example, if the government (only ministries associated with NPAP) has built new recycling facilities since the NPAP was created then this would be included in the modelling. These figures are then compared to the SCS 2025 scenario to assess progress towards system change.
- The marine waste modelling uses the Jambeck model associated with coastal areas only. The Jambeck model combines the plastic waste generation rate, the coastal population and the % inadequately managed waste to estimate the marine mismanaged plastic waste for a country. This estimate is then compared to the Jambeck 2025 estimate[89]to calculate the reduction in marine mismanaged plastic waste which can then be compared to the illustrative reductions in the Defra Business Case.

[89] Jambeck et al, (2015) Science paper, Plastic waste inputs from land into the ocean

Table 4: Modelling country profile: Ecuador

	ECUADOR		
	Impact indicator #1 (KPI #5) – solid waste and pollution avoided	**Business case impact indicator** - Marine Mismanaged Plastic Waste Reductions	**Impact indicator #2** (KPI #7) – people benefiting from strengthened or new livelihoods
Progress to FY2025	**21,679 tonnes of plastic waste avoided**, entirely attributable to one large-scale consumer reuse implemented by Huella Verde (an NPAP member). In real terms, this means there was an increase in plastic waste generated of 49,688 tonnes since the 2022 baseline. **30,383 tonnes of plastic waste better managed**, mainly driven by (a) recycling interventions and (b) dumpsites converted to sanitary landfills by municipal governments. This equates to 50.8% of 2025 SCS target for avoided plastic waste; and 91.3% of the 2025 SCS target for better managed plastic waste.	**95,812 tonnes reduction in marine mismanaged plastic waste** relative to the 2025 Jambeck projection— a 45.4% reduction: ○ 45% (94,923 tonnes) reflects pre-GPAP improvements ○ 0.4% (889 tonnes) is attributable to GPAP/NPAP and partner interventions (2023–25). Major drivers include (a) expansion of sanitary landfills, (b) recycling innovations, (c) Huella Verde's consumer reuse model.	**1,814 people benefited from strengthened or newly created livelihoods** linked to GPAP/NPAP activities. Over 95% of all beneficiaries saw their livelihoods strengthened while the remaining gained newly created livelihood opportunities. Impacts were concentrated in the urban waste management sector. Gender reporting is very limited (there's no data on gender for 97% of beneficiaries).
Trajectory: 2030 & 2040	For both avoided waste and better managed waste, Ecuador is likely to be on track to meet SCS targets for 2030 and 2040, given progress to 2025, alignment between actual interventions and SCS assumptions, and the fact that interventions to date are already planned to continue and expand beyond 2025.	Sustained system-change interventions would allow **Ecuador to reduce marine mismanaged plastic by more than half in 2040:** ○ 2030: 97,589 tonnes ○ 2040: 48,197 tonnes Given progress to 2025, **Ecuador can is on track to meet 2030 objectives if implementing SCS-level action**. Achievements of 2040 targets appear highly feasible under SCS.	If the expansion of recycling infrastructure, digitalisation, as well as reuse models continue – paired up with the formalisation and strengthening of informal waste workers - new jobs and livelihood opportunities will continue to grow.

Table 5: Modelling country profile: Ghana

	GHANA		
	Impact indicator #1 (KPI #5) – solid waste and pollution avoided	**Business case impact indicator** - marine mismanaged plastic waste reductions	**Impact indicator #2** (KPI #7) – people benefiting from strengthened or new livelihoods
Progress to FY2025	**14,811 tonnes of plastic waste avoided**, with **99%** attributable to the accelerated uptake of rPET in beverage packaging by GRIPE member companies. In real terms, this means there was an increase in plastic waste generated of 99,281 tonnes since the 2020 baseline. **513,050 tonnes of plastic waste better managed**, mainly driven by (a) the commissioning of 13 new recycling and composting plants, exceeding SCS expectations by 400%, and (b) Ghana's first bottle-to-bottle rPET facility. This equates to 8.6% of the 2025 SCS target with progress limited for key upstream solutions (elimination, reuse, refill, compostables).	**211,054 tonnes reduction in marine mismanaged plastic waste** relative to the 2025 Jambeck projection— a 64.9% reduction: ○ 31.7% (103,051 tonnes) reflects pre-GPAP improvements already in motion by 2020. ○ 33.2% (108,033 tonnes) is attributable to GPAP/NPAP and partner interventions (2021–25). **Major drivers include:** (a) reduction in inadequately managed waste from 81% (2010) to 32% (2025); (b) significant growth in recycling capacity, (c) continued population growth in coastal areas offset by improved downstream systems.	**5,026 people benefited from strengthened or newly created livelihoods** linked to GPAP/NPAP activities. Over 70% of all beneficiaries gained newly created livelihood opportunities, showing strong job creation in the sector. Impacts were predominantly urban and concentrated in the waste management and recycling sectors. **2,523 women, 1,852 men,** and 651 unreported beneficiaries.
Trajectory: 2030 & 2040	**Avoided waste:** Unlikely to meet long-term SCS targets without stronger upstream policy instruments (e.g. EPR, standards, incentives for reuse). **Better managed waste:** Ghana is **on track or ahead** of 2030/2040 trajectories, assuming continued growth of collection and recycling infrastructure.	Sustained system change interventions would allow **Ghana to meet or exceed GPAP's 2030 and 2040 ocean plastics objectives:** ○ 2030: 148,129 tonnes ○ 2040: 114,896 tonnes Given progress to 2025, **Ghana is broadly on track under the SCS pathway**.	**If current investments in recycling,** franchised collection and community-based initiatives continue**, Ghana is positioned to expand livelihood creation significantly,** though a clearer national strategy for formalising and safeguarding informal sector livelihoods will be necessary to achieve sustained, inclusive growth.

Table 6: Modelling country profile: Indonesia

	INDONESIA		
	Impact Indicator #1 (KPI #5) – solid waste and pollution avoided	**Business case Impact Indicator** - Marine Mismanaged Plastic Waste Reductions	**Impact Indicator #2** (KPI #7) – people benefiting from strengthened or new livelihoods
Progress to FY2025	**0 tonnes of plastic waste avoided.** In real terms, this means there was an increase in plastic waste generated of 3,012,558 tonnes since the 2017 baseline. **273,067 tonnes of plastic waste better managed**, mainly driven by (a) increased sanitary disposal; (b) formal recycling; and (c) RDF (refuse-derived fuel) facilities.	**1,482,957 tonnes reduction in marine mismanaged plastic waste** relative to the 2025 Jambeck projection— a 20% reduction: ○ 48.6.% (3,602,219 tonnes) reflects pre-GPAP improvements already in motion by 2019. ○ -28.6% (-2,119,262 tonnes) is attributable to GPAP/NPAP and partner interventions (2019–25). It appears negative because deterioration occurred relative to baseline values Major positive drivers include increase in sanitary/controlled landfills, expansion of RDF facilities and some increase in recycling capacity; while negative drivers are associated to increased plastic waste generation, worsening inadequately managed waste, and increased coastal population.	**7,608 people benefited from strengthened or newly created livelihoods** linked to GPAP/NPAP activities. Over 80% of all beneficiaries gained newly created livelihood opportunities, showing strong job creation in the sector. Impacts were distributed between urban and rural areas and concentrated in the waste management sector. No data on beneficiaries' gender was reported.
Trajectory: 2030 & 2040	**Avoided waste:** Unlikely to meet long-term SCS targets without stronger upstream reduction, controlled disposal capacity, and scaling recycling infrastructure. **Better managed waste:** progress is partial.	Given progress to 2025, **Indonesia is not on track to meet targets without rapid, large-scale change**.	**It is most likely this indicator will exceed future targets,** given growing waste sector labour demand. However, reporting systems require improvement, particularly around GESI data quality.

Table 7: Modelling country profile: Viet Nam

	VIET NAM		
	Impact Indicator #1 (KPI #5) – solid waste and pollution avoided	**Business case Impact Indicator** - Marine Mismanaged Plastic Waste Reductions	**Impact Indicator #2** (KPI #7) – people benefiting from strengthened or new livelihoods
Progress to FY2025	**12,071 tonnes of plastic waste avoided.** This was driven almost exclusively by increased recycled content and lightweighting of PET bottles by PepsiCo and Unilever Viet Nam, plus one small reuse/refill pilot (VietCycle's Cycle Packing). **388,062 tonnes of plastic waste better managed**, mainly driven by (a) increased recycling facilities; (b) strengthening of informal recycling networks; and (c) construction of new waste-to-energy plants. This equates to 2.2% of the SCS 2025 for avoided plastic waste, and 16.9% of the SCS 2025 for better managed plastic waste. Viet Nam is therefore below SCS expectations for 2025.	**2,330,662 tonnes reduction in marine mismanaged plastic waste** relative to the 2025 Jambeck projection— a 55.9% reduction: ○ 71.5.% (2,983,350 tonnes) reflects pre-GPAP improvements already in motion by 2019. ○ -15.6% (-652,688 tonnes) is attributable to GPAP/NPAP and partner interventions (2019–25). It appears negative because deterioration occurred relative to baseline values. Major positive drivers include expansion of waste-to-energy facilities and some improvement in recycling; while negative drivers are associated with increased plastic waste generation per capita, worsening inadequately managed waste, and degradation of urban and rural sanitary landfills into dumpsites.	**9,615 people benefited from strengthened or newly created livelihoods** linked to GPAP/NPAP activities. Over 86% of all beneficiaries saw their livelihoods strengthened while the remaining gained newly created livelihood opportunities. Impacts were mainly in the urban waste management sector. Very limited data on beneficiaries' gender, age or disability status was reported.
Trajectory: 2030 & 2040	Vietnam is not on track for 2030 SCS KPI #5 levels and is unlikely to meet 2040 targets without major systemic change, especially in upstream reduction and recycling scale-up.	Vietnam is not on track to meet GPAP marine-plastic reduction goals by 2030 or 2040. SCS ambitions require a degree of plastic waste prevention and management improvement not reflected in the observed 2025 performance.	**It is likely that this indicator will exceed future targets by 2030 and 2040,** given growing waste sector labour demand. However, reporting systems require improvement, particularly around GESI data quality.

Cost-benefit analysis

The results presented above have been used to inform cost-benefit analysis which has similar scope and similar limitations, i.e. it looks at four countries only and these estimates are based on data that has significant shortcomings and assumptions.

Overall, value for money is considered to be strong but the cost benefit analysis of results to date presents a mixed picture: Ghana being highly positive, Indonesia and Viet Nam positive, and Ecuador showing negative returns.[90] The negative returns in Ecuador are largely driven by modest benefits achieved (plastics better managed, jobs created, carbon reduced), especially compared to the high industrial and GPAP costs. However, a longer time horizon with economies of scale considered could change the findings significantly.

Under central-case assumptions and a conservative attribution of 10%, the Ghana NPAP yields a net present value of over £34 million and a benefit–cost ratio of 10.5. Even under low-valuation and lower-attribution scenarios, the programme remains cost beneficial. When projected to 2040, an exercise acknowledged as highly uncertain, benefits increase dramatically due to the relatively low cost of ongoing government-led implementation once set up costs have been absorbed. However, Ecuador is the clear outlier. With a BCR of just 0.3, costs have exceeded benefits to date, and at £47 per tonne of plastic avoided/better managed, it was by far the most expensive country to operate in. The very low job creation figure adds to the picture of a programme that has not yet achieved scale. This negative return also reflects the low waste benefits achieved so far, and relatively high industrial fixed costs of a reuse scheme. However, it should be noted that of all the case study countries included in this evaluation, Ecuador was considered to be particularly successful in terms of GPAP influencing change and the commitment of the government to deliver the Ecuador NPAP roadmap. The potential for economies of scale in Ecuador, therefore, could result in a positive return going forward. See Annex 4 for further details.

Table 8: Benefits and costs for Ecuador, Ghana, Indonesia and Viet Nam to FY25/26

	Ghana	Indonesia	Ecuador	Viet Nam	Total/Average
Present value total benefits (£)	34,448,359	5,775,734	840,441	11,500,378	52,564,912
Present value total costs (£)	3,280,229	3,516,722	2,491,440	3,293,292	12,581,683
Benefit to cost ratio	10.5	2	0.3	4.5	4
Cost per tonne of plastic avoided/ better managed (£)	5	13	47	6	18

When looking beyond FY25/26, undertaking extrapolations to 2040 is a highly uncertain exercise as we do not know what will happen when GPAP funding stops. The results are shown below in Table 9. The very high returns reflect the much lower costs associated with roll-out, as there are no set-up costs, just government implementation costs.

[90] Ghana has a BCR of 11 and a cost per plastic tonne better managed of £5.28; Indonesia has a BCR of 2 and a cost per plastic tonne better managed of £13; Ecuador has a BCR of 0.3.

Table 9: Cost-benefit results for Ecuador, Ghana, Indonesia and Viet Nam to 2040

	Ghana	Indonesia	Ecuador	Viet Nam	Total/Average
PV total costs (£)	7,606,080	8,694,176	5,844,432	6,862,768	29,007,456
PV total benefits (£)	262,016,956	52,431,681	6,392,460	87,472,791	408,313,889
BCR	34	6	1.09	13	14

In summary, the modelling of the GPAP impact indicators shows that traction for impact-level change can be generated. GPAP has contributed to the enabling environment essential to this change, deepening commitments from a range of stakeholders in support of systemic change and expediting changes that may have already been under way. It also shows the need for initiatives like the NPAPs that pro-actively encourage a transformation of the plastics economy to try to avoid business-as-usual upstream from overwhelming improvements made downstream, as in Indonesia.

The cost-benefit analysis results suggest that once NPAPs become operational and local systems begin to function more effectively, GPAP-supported interventions can produce substantial long-term benefits relative to costs. However, the prerequisite for these benefits to materialise is the existence of a sustained commitment across the whole plastics-value-chain to deliver the balance of upstream and downstream interventions presented in the roadmaps.

Nevertheless, the achievements considered in the modelling and cost-benefit analysis account for only four countries out of 25 and it is likely, therefore, that these numbers are higher across the entire GPAP portfolio. However, there a number of reasons why we cannot assume similar trajectories across all countries. Hence, these figures need to be used with extreme caution and should be used as an initial step in understanding GPAPs added value from which to build upon over time as data becomes more robust. The reasons why we cannot assume similar trajectories across all countries are set out below:

- Three of the countries that were modelled are considered to be the most mature in terms of NPAP delivery and are not representative of the other 22 countries, the majority of which are in a less mature state and hence less likely to have influenced similar levels of change.
- Indonesia and Viet Nam could account for 36-39% of the total business case marine plastic waste reductions (tonnes) and therefore similar rates cannot be expected across the 21 countries that have not been modelled.
- Of the 25 countries with NPAPs, the modelling team estimates the maximum reduction in 2040 could be ~72% of the 22 million tonne target in the Defra business case as many of those 25 countries will see relatively small gains compared to countries like Indonesia and Viet Nam.
- Indonesia presents a cautionary tale; that gains made in management of waste can be overwhelmed by significant increases in the volume of waste that is generated upstream and similar patterns could be happening in any of the other 21 countries not modelled.

- It is very difficult to measure the significance of GPAP's added value and the extent to which NPAPs have contributed to the change seen; there are many other – often more powerful – factors at play and hence the presence of an NPAP in the other 21 countries cannot be assumed to influence change (e.g. in Pakistan and Maharashtra they do not).
- The modelling for the four countries is based on data that is far from perfect and these estimates come with significant limitations and uncertainty (see Annex 5 for more details).

For these reasons, the evaluation team advises against using the modelling and cost-benefit analysis values out of context and without being accompanied by clear and detailed explanations of the shortcomings and assumptions outlined here and in the annexes.

Finding 18

GPAP's 25 country footprint gives it a status on the global stage and an ability to convene NPAP countries to be better prepared and hence more effective in negotiations. Although the last round of negotiations did not agree on a treaty, GPAP has contributed to the global commitment for one while the roadmaps give NPAP countries a head start, should a treaty come into effect.

Alongside the waste management and quality-of-life impact statement outlined in Finding 17 , there is a second impact statement in the GPAP ToC which aims for an "enlarged coalition of countries and private sector committed to meaningful change, increasing the likelihood of global plastic action".

The establishment of 25 NPAPs (although two are largely inactive) gives GPAP a geographical footprint that is impressive and increases its credibility and added value on the global stage (see Finding 4 for further discussion of the pros and cons of the "25x25" strategy). Through this network GPAP has met its outcome-level objectives that sit under the impact statement: keep plastic pollution on political agendas as systemic concerns to the environment and the economy; strengthen the credibility and added value of NPAPs to increase their national and international influence; and, in doing so, achieve impact-level change.

It has done this through a combination of convening, facilitating and providing technical support such as the Finance Coordination Working Group (see Textbox 3) and used a growing media presence to reach public audiences[91] as well as provide opportunities for leaders to speak on the national stage.

In Ecuador, GPAP support contributed to the government taking a more ambitious negotiating position and align with high-ambition coalitions. Importantly, this confidence was grounded in demonstrable national progress rather than rhetorical commitment, pointing to its roadmap, modelling, and policy integration as evidence that higher standards were feasible. The NPAP mechanism also meant that the government could consult other stakeholders before and after the INC meetings, improving transparency and reducing the risk of disconnect between national and international positions.[92]

GPAP has also been able to use its convening power to raise awareness of how different global agreements can intersect and how different parts of the value chain can work together,

[91] A 2025 GPAP communications report showed that unique users visiting the GPAP website was 14k during INC-5.1 and increased to 25.6k for INC-5.2; media mentions increased from 5 to 528 in the same period. Source: *GPAP Communications Report Oct 2024 – Oct 2025.*

[92] Ecuador CS.

such as chemical producers and manufacturers. It has also used its voice to maintain momentum, pushing for plastic pollution to remain on the international agenda.[93]

Furthermore, it is important to recognise the complementary role that GPAP plays with other global advocates of change, closely working with other major stakeholders like GEF, UNEP and World Bank. As a public–private partnership, GPAP can play a unique role, avoiding the criticism and scrutiny of engaging the private sector that civil society or UN agencies might receive while allowing the likes of the World Bank and GEF to stay more focused on investing, providing large-scale resourcing and benefiting from having established, credible and strategic platforms already in place through the NPAPs.[94]

Regardless of whether the last round of the Intergovernmental Negotiating Committee is perceived as a failure to reach an agreement or a step to a strong treaty in the future, treaty negotiations are about dialogue, finding common ground and compromising – all of which are best served by bringing people together to speak openly.[95] In a world where we need more dialogue not less, GPAP has made important contributions.

4.5 Sustainability

Summary: None of the NPAPs are sustainable and, without continued funding, many of the benefits and momentum gained by the NPAPs are likely to be lost with a risk that the reputation of future multistakeholder initiatives is damaged. GPAP is working hard to diversify funding and is committed to transitioning as many NPAPs as possible to the *sustain* phase of its model.

Finding 19

Two of the NPAPs can be considered to be moving into the "sustain" phase and across all the NPAPs there is a real risk that without further funding they will cease to function and could undermine future multistakeholder collaborations.

To date, five NPAPs are considered to be in the *prepare* phase, eight are fully in the *build* phase and a further 10 are transitioning out of the build phase (see Figure 10). Ghana and Panama are considered to be finalising their graduation to sustain with funding provided by non-GPAP sources.[96] Nevertheless, the majority of the NPAPs require ongoing funding, most of which has previously come from the Canadian and UK governments, through GPAP. *Sustain* strategies for the most advanced NPAPs are under development - drafted for Indonesia, Ghana, Peru and Ecuador - and it is hoped that these strategies will be delivered by early 2028. Also by 2028, it is hoped that the remaining 13 NPAPs will have completed roadmaps.

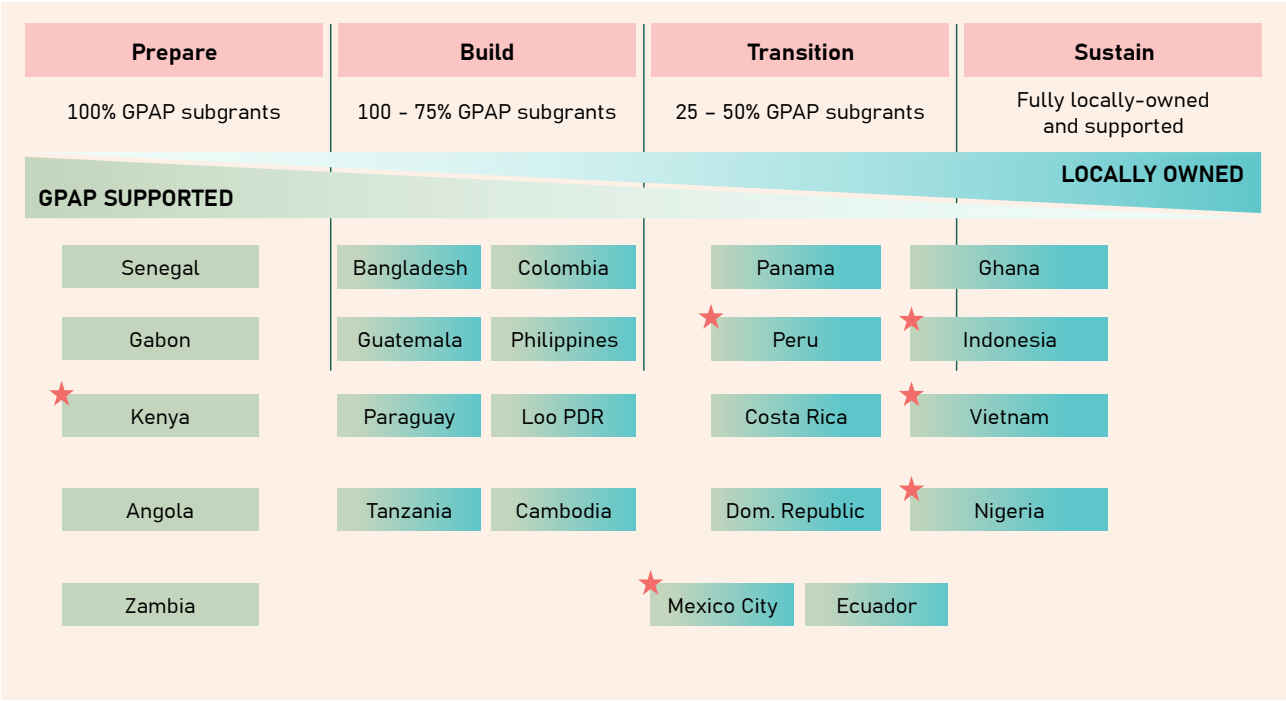
[93] KII13; KII17.

[94] KII17; KII12; KII16.

[95] KII12; KII16.

[96] Recommendations Co-Creation Workshop with WEF and Defra, March 2026.

Figure 10: NPAP progress status, December 2025[97]



The main challenges facing the sustain phase is funding as well as varying levels of commitment from the NPAP host, government or private sector. GPAP estimates that NPAP running costs in the sustain phase would be around £110,000 per NPAP per year. This is a relatively modest sum considering the potential benefits of transforming plastics economies and significantly less than the build phase which averages so far £1.7 million per country. Yet, there is still a high dependency of the NPAPs on donor funding via GPAP. Two of the most viable alternatives rely on funding from the government and/or the private sector, either of which could compromise a core principle of the NPAPs – to be neutral and trusted – and which are typically not on offer to the scale needed in any case. Another option is funding through other large-scale programmes such as GEF which potentially will cover NPAP costs in Ghana or diversifying GPAP and NPAP grants through other donors. However, neither of these options are any more sustainable than the current UK or Canadian funding.

While the funding landscape for GPAP has worsened substantially in recent years, this only highlights that sustainability and a GPAP exit strategy were not sufficiently considered during the design phase. Compounded by poor communication about what would be expected of NPAP stakeholders in the *sustain* phase (see Finding 15), the GPAP network is potentially more vulnerable than it might have been, had more attention been paid to sustainability models and financing solutions sooner.

Without further funding there was a general consensus across the case studies that the NPAPs would cease to function and the roadmaps would be unlikely to influence any long-term change (see Finding 15). Not only would this mean the loss of sunk costs for those donors who have invested to date, a failure of the NPAPs could also damage the reputation of the host organisations and create a wariness across the value chain that makes it harder in the future to build support for multistakeholder collaboration.

[97] Steering Board Meeting presentation, 11/12/2025.

Finding 20 **While funding constraints are very real, GPAP is working hard to identify funding solutions and beginning to identify a strategy that can maintain its influence but with fewer resources.**

Over the next two years, GPAP is looking to migrate NPAPs to the "sustain" phase with four countries considered to be the closest to this transition: Indonesia, Viet Nam, Mexico City and Ghana. As part of its sustain strategy, GPAP will be identifying "lighthouse" NPAPs – NPAPs that are well grounded, resourced and have a strategic role to play in encouraging other countries to commit to meaningful change. At the same time, GPAP intends to complete roadmaps in all 25 countries and continue to engage globally in support of a global plastics treaty. There is no intention at this stage to take on more countries, although the demand is there.[98]

It is clear that there is a strong interest for the NPAPs to continue and for GPAP to leverage the foundations it has crafted this far to support system change that can really shift the dial on the global plastics pollution crisis. Many of the NPAPs have already demonstrated a resilience and longevity, continuing in most cases despite elections and changes in government. This reflects the strength of GPAP support, the hard work of host organisations, a commitment of NPAP members and the cross-party political importance placed on plastic pollution and the circular economy. These are all important characteristics for sustainability.

As many of the upfront costs have been covered by GPAP already, the sustain phase presents good VFM for a donor or investor given the ready-made global footprint, potential significance of system change to tackle an urgent, intersectional, planetary crisis, and access to a mix of government, private and community-based stakeholders. This will become substantially more relevant should an ambitious global plastics treaty be agreed – a treaty that is more likely to be reached due to the presence of GPAP and its network of NPAPs.

[98] Discussion with GPAP senior managers at the evaluation's Emerging Findings workshop (March 2026).

5 Conclusions

Conclusion 1: GPAP has responded to the scale of the plastics pollution crisis and developed an operational model that provides unique strategic value, nationally and globally, successfully reducing critical barriers that inhibit transformational change of the plastics economy. GPAP works to remove barriers that have the potential for catalytic effect across the whole plastics value chain, providing a shared understanding of the scale of the problem, consensus over what change is needed and bringing together a range of stakeholders that previously operated in silos. To overcome these barriers requires shifting political mindsets, shifting economic perspectives, and shifting work cultures. GPAP has taken on the challenge of doing this in 25 countries, across many different stakeholders with diverse interests – at times in tension with each other. As such, GPAP has become an important part of the plastics landscape, generating support across governments, the private sector and civil society and there is a widespread desire across stakeholders for GPAP and its network of NPAPs to continue functioning.

Conclusion 2: Initial evidence suggests the catalytic change that GPAP seeks to achieve is feasible in some contexts and its combination of national and global convening complement each other to strengthen a community of peers that wish to see ambitious change - domestically and internationally. Whilst it is difficult to track changes in waste management and plastic pollution in many of the GPAP countries due to weaknesses in national data, where modelling has been possible, there are pockets of success. These pockets suggest that change at scale is feasible where upstream and downstream interventions are delivered in tandem and this evaluation shows that GPAP has made an important contribution to the enabling environment needed to make this happen. However, traction is patchy, inconsistent and hard to predict, compounded by weak MEL systems that mean GPAP struggles to articulate its added value and make evidence-informed decisions about where to scale up, and scale down, to be most effective. This matters in a world where securing funding is becoming increasingly challenging and programmes are having to deliver more with less.

Conclusion 3: GPAP has refined an effective approach to energising a wide range of stakeholders and efficiently reaching a consensus for change which is replicable across differing contexts. Key to GPAP's effectiveness has been its ability to convene a range of stakeholders from governments to multinational companies to informal workers. The NPAPs have been effective in achieving consensus in the face of competing interests. The close involvement of governments and a focus on policy change complements the work of others engaged in this space and provides a multistakeholder platform that is considered, neutral, trusted and where all stakeholders can be heard. This has resulted in a consensus for a series of roadmaps that not only fill critical knowledge gaps about the scale of the problem but also build consensus of the need for ambitious change, offering a common reference point to coordinate and guide interventions across the value chain. This is not an easy task.

Conclusion 4: The roadmaps that are at the heart of the GPAP model provide an effective communication and strategic tool to promote coordinated, system-wide change and a clear, compelling rationale for action. The roadmaps benefit from broad stakeholder involvement and support, however, further clarity on ownership and implementation leadership would strengthen delivery and help ensure that gains to date are sustained and scaled. The visibility of a level playing field that the roadmaps present, the shared burden across the supply chain, the opportunities of the circular economy and the message that – collectively – a real difference can be made, has created important momentum at the national level. However, this momentum is fragile and easily deflated by poor communication or no clear follow-on strategy for delivery. At the same time, the finance roadmaps are only just beginning to identify the financing needs of roadmap delivery. As such, the path forward is

uncertain and commitments to systemic change across the plastics value chain are not guaranteed, making the continued stewardship of the NPAPs and their challenge to the status quo all the more important.

Conclusion 5: GPAP's decision to expand rapidly before it has had time to build a strong evidence base was a necessary trade-off given the scale of the plastics pollution crisis and the urgent need for global systemic change. Set-backs in the global plastics treaty and a retreat of donor funding across all sectors leave GPAP with a challenging funding landscape as it tries to support 25 NPAPs into the sustain phase with a nascent evidence base to demonstrate their added value. GPAP's bold push for "25-by-25" provided it with a footprint that has the potential to influence systemic change. As is typical of any programme focused on long-term systemic change, this scaling up of investments preceded the opportunity to build a robust evidence base to prove the model works. At the same time, donor funding is receding globally whilst the NPAPs are entering the sustain phase – a phase characterised by a decentralisation and diversification of funding across three continents. In other words, GPAP needs to persuade more funders to invest in NPAPs when funding is scarce and the evidence that NPAPs add value is still emerging. This is a challenging environment to navigate and is a reminder of the trade-offs necessary when trying to influence systemic change at a global scale in the face of an urgent crisis. It is also a reminder of the importance of generating robust evidence at the same time as preparing NPAPs to fully embrace the independence expected of the sustain phase.

Conclusion 6: A transition to financial sustainability for NPAPs has begun in some countries, providing valuable insights for future funding models. However, these models present possible tensions between sustainability and neutrality that could undermine NPAP effectiveness. A key rationale underpinning the NPAPs is that often neither the government nor the private sector are seen as impartial by all stakeholders associated with the plastics value chain, meaning that any funding solutions that rely on substantial private or public funds could undermine NPAP neutrality. There is a risk, therefore, that as donor funding retreats, NPAPs become more susceptible to entrenched economic incentives and established power dynamics, with the potential that downstream interventions are prioritised at the expense of system-wide change. These tensions between NPAP sustainability and NPAP neutrality may be unavoidable and it is incumbent on GPAP to find ways to manage these tensions whilst continuing to support the negotiations for a global plastic pollution treaty which can provide important incentives for systemic change.

Conclusion 7: Ultimately, GPAP and the NPAPs have made important contributions to increasing the enabling environment for circular economies and accelerating the adoption of progressive policies that incentivise reductions in plastic pollution, becoming important parts of the plastics landscape. The next phase presents a critical opportunity to convert this momentum into sustained, system-wide circular economy transformation. While there are weaknesses in GPAP's design, there is substantial good will for the NPAPs to continue and an opportunity for donors to invest in strategic mechanisms that are relatively low-cost when considering the ready-made global footprint that GPAP provides and the potential transformational change they could have on a global intersectional crisis. After many years of delivery across so many contexts, the GPAP team have a wealth of experience that can inform the next phase and make the improvements necessary for a more efficient, effective and reassuring programme. GPAP and its network of NPAPs not only support national action but also increase the likelihood that a global plastics treaty can be successfully negotiated and implemented – a treaty that is likely to have profound implications for the added value of the work that GPAP and the NPAPs can deliver.

6 Recommendations

The following recommendations have been co-developed with WEF and Defra. Each recommendation is accompanied by a designated owner, a measurable deliverable and timeframe for delivery. This includes reference to gender equality, disability and social inclusion (GEDSI) principles to bring the recommendations in line with UK government expectations.

Recommendation 1: Consolidate available resources around priority NPAPs that offer the greatest strategic opportunity for transforming plastics economies nationally and globally (GPAP Director; complete consolidated list of countries and support to be provided to GPAP Board by July 2026).

It is not expected that all 25 NPAPs will successfully transition to a locally-owned sustain phase. GPAP should build on existing reviews of the NPAPs and assess their current status, level of commitment from key stakeholders, and potential to meet NPAP and GPAP objectives. This should include GEDSI ambition and delivery as a key criterion, de-prioritising those countries that demonstrate a reluctance to institutionalise gender and inclusion principles. Those that do not meet critical thresholds should be exited early in a responsible way. To do this, GPAP should:

- Develop measurable criteria that prioritise NPAPs for continued support, balancing equity, level of investment for GPAP and potential impact on the plastics pollution crisis (link to Recommendation 7 to regularly assess progress towards "sustain").
- Consolidate the available funding around the prioritised NPAPs to provide more concentrated support during the build and sustain phases.
- Allow sufficient time and support to ensure that any exit from current NPAP processes is conducted responsibly.

Recommendation 2: Prepare NPAP Steering Boards for a responsible transition to the sustain phase (GPAP NPAP Lead; strategies in place for each country by end Dec 2026).

Build on the on-going "sustain" strategies to ensure each NPAP has a clear strategy to transition through the build and sustain phases. These strategies should be reviewed and updated on a rolling basis, starting with the most mature NPAPs and should include:

- A review of the political economy of each NPAP to identify any key barriers and opportunities to completing the "sustain" phase and what this means for GPAP support.
- A review of how gender and social inclusion will be institutionalised beyond GPAP's involvement and what this means for GPAP support.
- A plan to strengthen NPAP leadership through targeted support to identify clear roles and responsibilities for delivering the roadmap.
- A commitment to support fundraising opportunities that are regional or multi-country to help NPAPs find resources that are independent of, and non-competitive with, GPAP.

Recommendation 3: Develop a GPAP Community of Practice to accommodate GPAP alumni and provide on-going support and sharing of expertise and best practice (Global Metrics and Roadmaps Lead; Community of Practice operational with active membership by March 2027).

As NPAPs mature, become locally owned and transition to the sustain phase, they should be encouraged to maintain engagement through the GPAP community, supported with up-to-date learning, best practice and a community of peers that reinforce commitments to change. At the same time, demand for new NPAPs is likely to continue but GPAP is unable to provide close support. In response, GPAP should:

- In collaboration with existing NPAPs, develop a NPAP "charter" that clearly sets out core principles that any community member must follow, including a common set of minimum GEDSI standards.
- Set-up a grievance process to allow NPAP members or observers to raise concerns should any NPAP be deemed not to deliver these principles or there are safeguarding concerns.
- Create a community of practice that looks beyond GPAP to similar initiatives that can share learning and can sign-post other opportunities for collaboration.
- Establish a dedicated GEDSI working group to support learning, including how to embed GEDSI in roadmaps, governance models and other tools to support inclusive and active participation of women, informal workers, and other vulnerable groups.
- Provide an avenue for countries outside of GPAP to access the community and learn about how to set up their own NPAPs and undertake roadmap processes or similar.

Recommendation 4: Continue to strengthen and support the negotiations for a global plastics treaty through impartial, multistakeholder dialogue and knowledge sharing (GPAP Head of Community and Impact; convene NPAP members to discuss and prepare for negotiations in advance of INC5.4).

GPAP should continue its support to negotiations for a global plastics treaty and bring to the fore its experience of supporting NPAPs and Roadmaps. GPAP should:

- Continue to convene NPAP members and other relevant stakeholders in preparation for treaty negotiations, strengthening a community of peers who are committed to change.
- Work with GPAP donors and NPAPs to showcase GPAP tools as potential building blocks of any future treaty.
- Link back to the NPAP community of practice to share key learning and thought leadership.
- Work closely with other practitioners delivering similar initiatives to GPAP to combine resources, expertise and networks for maximum collective effect on transforming plastics economies.
- Ensure inclusive representation of informal workers and other marginalised groups as part of national delegations or multistakeholder consultations in treaty-related events.
- Adapt this strategy in the event of a treaty being agreed, sharing learning and expertise regarding roadmap delivery and oversight.

Recommendation 5: Overhaul GPAP's approach to supporting vulnerable groups and the informal sector whilst ensuring that GPAP and NPAPs are GEDSI-empowering wherever possible (Small Grants Lead and GEDSI lead; submit a strategy outlining GPAP's GEDSI-empowering approach to GPAP Board by July 2026).

GPAP should continue to promote GEDSI principles, raising awareness amongst NPAP members and encourage roadmaps that are sensitive and responsive to marginalised groups, especially the informal sector. To do this, it should re-purpose the funding for the small grants mechanism to find more effective ways of contributing to strategic change, for example:

- Continue to invest in GEDSI knowledge products where they can add value to encourage the advancement of the circular economy and equity in tandem, learning lessons from the informal worker survey conducted as part of this evaluation.
- Beyond knowledge products, include tools that support the institutionalisation of gender and inclusion principles, such as gender-responsive budgeting, representation mechanisms that explicitly address structural barriers to engagement, or social protection safeguards.
- Strengthen quality assurance mechanisms of the NPAPs and roadmaps to ensure that inclusion is embedded in GEDSI-specific targets and measurable commitments that inform stakeholder engagement and strategic direction.
- Consider re-purposing the small grants fund to work with partners that have the potential to scale-up proven approaches that enhance the circular economy and a just transition for informal workers. From a GEDSI perspective, this may mean the establishment of inclusion taskforces and/or other formal structures for participation, and supporting informal workers, women and other vulnerable groups to form or join worker associations that can lead to better representation and improved working conditions.

Recommendation 6: Apply lessons learnt to date about how best to support the shift from roadmap development to roadmap delivery, supporting NPAPs to drive forward the systemic change needed to address the plastics pollution crisis (GPAP NPAP Lead; document key lessons and organise participatory sessions to share those lessons across the NPAP network by July 2026).

Valuable lessons have been learnt about how to move from roadmaps to operational change across the plastics value chain. These lessons should be actively shared with NPAPs across the network and part of on-going knowledge exchanges between NPAPs. Key lessons include:

- Clearly explain to all NPAP members what the roadmap will and will not deliver so expectations are managed from the start, and make sure they understand that they will need to take a proactive role in its implementation.
- Throughout the process, clearly identify what the host government needs in order to transfer roadmap interventions into policy and build in additional processes or detail that maximise the utility of NPAP activity for the government.
- Allocate NPAPs with discretionary resources to be opportunistic, setting-up sub-groups that can tap into enthusiasm for certain issues immediately and link these to similar sub-groups of other NPAPs to share lessons and expertise.
- As the roadmap process is being finalised, work with the NPAP members to identify a manageable number of priority interventions for immediate attention, ensuring a balance of up and downstream activity. Tailor the delivery approach of those priorities based on the context, intervention type and the operational preferences of the stakeholders willing to drive change forward.

- Accompany these activities with simple MEL systems that have clear roles and responsibilities and share accountability for success and failure with all NPAP members.

Recommendation 7: Review and refine GPAP's MEL systems to clearly align with its added value, enhance the effectiveness of GPAP and the NPAPs, and support long term decisions that will aid sustainability (Operations and Fundraising Lead; submit a documented MEL system to Defra by July 2026).

As GPAP enters a new phase of funding and focus on the sustain phase, it should refresh its MEL systems as follows:

- Clearly define what success looks like for GPAP under the sustain phase and what this means for tracking progress towards exit strategies (political commitment, independent funding, private sector traction, public support, etc).
- Design MEL systems that can monitor and evaluate GPAP success, identifying indicators that balance GPAP's primary role as a convenor, consensus maker and mobiliser with the long-term systemic change that it is designed to contribute to.
- Ensuring NPAPs and the GPAP Secretariat have sufficient resources to generate and validate evidence that can inform monitoring, learning and adaptation.
- Include VFM indicators that primarily focus on cost effectiveness, equity and sustainability compared against a counter-factual. Also include GEDSI indicators that can monitor, for example, representation of women and informal workers in governance, changes in worker recognition, or outcomes related to formalisation and social protection; disaggregate monitoring data by gender, age, or disability, when possible.
- Continue to provide technical support to the Metrics Advisory Groups within each NPAP and introduce data collation frameworks that can better monitor national-level progress, learning from the modelling approach adopted as part of this evaluation.
- Conduct case studies to build the evidence base of key thematic interventions that are of interest across NPAPs, for example, EPR policy engagements or reuse/refill initiatives; consider also a light-touch formative review as a midline assessment of progress towards the sustain phase that can learn lessons to enhance effectiveness.
- Consider using surveys of informal workers to track developments within the circular economy and changes in quality of life of informal workers.
- Conduct regular "pause and reflect" sessions that step back and assess GPAP progress against its ToC; engage NPAPs in the process to learn lessons and share insights.
- Consider working alongside an external MEL provider to help establish robust MEL systems.

Annex 1: Portfolio analysis: summary statistics and results of significant associations

Table A1.1 NPAPs: general picture: summary statistics (n=25)

Variable	Summary statistics
NPAPs by region (%)	Africa=32%; Asia=32%; Latin America=36%
NPAPs by country economic status and HDI (%)	Economic status[99]: Group A=44%; Group B=56% HDI[100]: Group A=48%; Group B=52%
NPAP by GPAP status (%)	Prepare=28%; Build=56%; Sustain=12%; Phasing out=4%
NPAP by main outputs published (%)	Action Roadmap: 52% Financial Roadmap: 12%
NPAP countries members of the High Ambition Coalition to End Plastic Pollution	Yes=52%; No=48%
NPAP countries that became members of the High Ambition Coalition after joining GPAP (n=13)	Yes=31%; No=69%

[99] NPAP countries were assigned to two economic groups for this analysis, based on the World Bank (2025) World Development Indicators dataset (Group A: high and upper-middle; B: lower-middle and low-income countries)

[100] Human Development Index, UNDP (2024). Human Development report 2023/2024. For this analysis, NPAP countries were divided into Group A (very high and high) and B (middle and low).

Table A1.2 NPAP Community members by sector (%, n=17): Summary statistics and significant associations

Variable	Summary statistics	Significant associations [101] Country context [102]
Public sector	mean=25%; median=23%; SD [103]=10%; R [104]=7-44%	Not significant
Private sector: all	Mean=36%; median=37%; SD=15%; R=4-58%	Economic status: not significant (Mann-Whitney U=51.5, p=0.15), although Group A tend to have higher values (mean=42% vs 30%) Similar results for HDI
Private sector: large corporates	Mean=14%; median=13%; SD=8%; R=4-37%	Economic status, not significant (U=48, p=0.27), although Group A tend to have higher values (mean=16% vs 11%) Similar results for HDI
Civil society and academia	Mean=30%; median=31%; SD=5%; R=20-41%	Economic status, not significant (U=24, p=0.26), although Group B tend to have higher values (mean=29% vs 32%) Similar results for HDI
International organisations	Mean=7%; median=6%; SD=7%; R=0-22%	Economic status: significant association (A<B; U=11.5, p=0.02) HDI: not significant, although Group B tend to have higher values (mean=6% vs 9%)
Informal waste sector	Mean=1%; median=0%; SD=2%; R=0-5%	Economic status: significant association (A>B; U=56, p=0.04) HDI: not significant, although Group A tend to have higher values (mean=1.6% vs 0.8%)

[101] When interpreting these results, be aware of data limitations, e.g., small number of observations. While non-parametric tests (Mann-Whitney U test, Spearman correlation test) have been used to accommodate small sample size, they may have less statistical power than parametric ones.

[102] Economic status and HDI.

[103] SD=standard deviation.

[104] R=range (min-max).

Table A1.3: NPAP Steering boards members by sector[105] (%, n=8): summary statistics and significant associations

Variable	Summary statistics	Significant associations
		Country context
Public sector	Mean=28%; median=28%; SD=10%; R=14-41%	Economic status[106]: Not significant, although Group B tend to have higher values (mean=23% vs 36%)
Private sector: all	Mean=37%; median=31%; SD=18%; R=23-77%	Economic status: Not significant, although Group A tend to have higher values (mean=43% vs 27%)
Private sector: large corporates	Mean=15%; median=16%; SD=13%; R=0-38%	Economic status: Not significant, although Group B tend to have higher values (mean=14% vs 18%)
Civil society and academia	Mean=16%; median=12%; SD=12%; R=6-42%	Economic status: Not significant, although Group A tend to have higher values (mean=26% vs 11%)
International organisations	Mean=14%; median=15%; SD=13%; R=0-32%	Economic status: Not significant, although Group B tend to have higher values (mean=7% vs 25%)
Informal waste sector	Mean=5%; median=3%; SD=6%; R=0-13%	Not significant

[105] Information extracted from https://www.globalplasticaction.org/countries

[106] All (except one) NPAPs with data on steering board composition belong to high and very high HDI so the association with this indicator has not been tested.

Table A1.4: Length of time between joining GPAP and publishing action roadmaps (no. months, n=13): summary statistics and significant associations

Variable	Summary statistics	Significant associations
		Country context [107]
Time passed between joining GPAP and Action Roadmap publication	Mean=25; median=25; SD=10.7; R=12-45	Economic status and HDI: significant association (A<B; U=6.5, p=0.05; U=4.5, p=0.03) Political stability indicator: negative significant association (Spearman ρ=−0.61, p=0.03) Government effectiveness indicator: similar association, although not significant at 95% CL, ρ=−0.52, p=0.07) Election cycle (national elections during the period: A: Yes; B: No): Not significant, although Group A tend to have higher values (mean=28 vs 19) Not significant association between dates and duration (earlier vs later NPAPs), although it suggests a negative trend (later NPAPs, less duration; ρ=−0.32, p=0.28)

[107] Political stability and government effectiveness indicators are part of the following dataset: Worldwide Governance Indicators, 2025 Revision, World Bank (www.govindicators.org).

Table A1.5: Action roadmaps' interventions,[108] by theme (%, n=14)

Variable	Summary statistics	Significant associations		
		Country context	NPAP membership composition	Baseline rates (circularity, managed waste)
Reuse	Mean=9%; median=8%; SD=5%; R=0-18%	Not significant	Not significant	Not significant
Recycling	Mean=14%; median=14%; SD=8%; R=0-30%	Not significant	Not significant	Not significant
Collection	Mean=11%; median=11%; SD=7%; R=3-21%	Economic status: Not significant, although Group B tend to have higher values (mean=7% vs 14%)	Not significant	Not significant
DRS	Mean=1%; median=0%; SD=2%; R=0-4%	Not significant	Not significant	Not significant
EPR	Mean=5%; median=6%; SD=4%; R=0-14%	Not significant	Not significant with NPAP Community membership. With NPAP steering board composition, moderate positive association with large corporates, although not significant at 95% CL (ρ=0.70, p=0.08)	Not significant
Infrastructure	Mean=11%; median=10%; SD=4%; R=5-20%	Not significant	Not significant	Not significant
Product design	Mean=15%; median=15%; SD=8%; R=0-28%	Not significant	Not significant	Not significant
Policy	Mean=31%; median=36%; SD=18%; R=0-62%	Economic status: Not significant, although Group A tend to have higher values (mean=35% vs 31%)	Not significant	Not significant
Bans	Mean=4%; median=4%; SD=2%; R=0-9%	Not significant	Not significant	Not significant

[108] Microsoft Copilot was used to compile and classify the interventions included in the NPAP Action roadmaps. The Action roadmaps provide information on these interventions and actions at different levels of detail and aggregation. Therefore, any interpretation of these results must consider this limitation (as well as the possibility of errors in the classification, even if an effort was made to verify Copilot's outputs). Interventions' themes are understood as the main focus of the intervention; while intervention types refer to the tool or mechanism proposed.

Table A1.6: Action roadmaps' interventions, by type (%, n=14)

Variable	Summary statistics	Significant associations		
		Country context	**NPAP membership composition**	**Baseline rates (circularity, managed waste)**
Capacity building/ training	Mean=11%; median=11%; SD=5%; R=0-20%	Not significant	Not significant	Not significant
Information/ behaviour change	Mean=9%; median=8%; SD=4%; R=3-17%	Not significant	Not significant	Strong positive significant association with baseline circularity (ρ=0.74, p=0.003)
Infrastructure	Mean=23%; median=19%; SD=16%; R=6-53%	Economic status: Not significant, although Group A tend to have higher values (mean=23% vs 19%)	Not significant	Not significant
Tools/ monitoring	Mean=6%; median=6%; SD=5%; R=0-14%	Not significant	Not significant	Not significant
Policy	Mean=45%; median=42%; SD=12%; R=32-71%	Economic status: Not significant, although Group B tend to have higher values (mean=43% vs 49%)	Not significant with NPAP Community membership. With NPAP steering board composition, strong positive association with large corporates, significant (ρ=0.87, p=0.01)	Not significant
Research/ diagnostics	Mean=6%; median=6%; SD=4%; R=0-12%	Not significant	Not significant	Not significant

Table A1.7: Action roadmaps baseline and SCS rates (%, n=14)

Variable	Summary statistics	Significant associations
		Country context
Baseline circularity/ recycling rate	Mean=9%; median=10%; SD=6%; R=1-24%	Not significant (economic status, HDI)
Baseline managed waste rate	Mean=37%; median=26%; SD=28%; R=5-94%	Economic status, not significant (U=37.5, p=0.11), although Group A tend to have higher values (mean=49% vs 24%) HDI: significant association (A>B, U=39, p=0.03)
Systems-change Scenario, circularity rate	Mean=57%; median=54%; SD=11%; R=44-88%	Economic status, HDI; not significant Baseline circularity rate: Not significant
Systems-change Scenario, managed waste rate	Mean=86%; median=88%; SD=10%; R=69-100%	Economic status, HDI: significant (A>B, U=45, p=0.01; U=40, p=0.02) Baseline managed waste rate: not significant but positive association (ρ=0.48, p=0.09)
Systems-change Scenario, recycling rate	Mean=23%; median=24%; SD=10%; R=10-40%	Economic status, HDI: not significant Baseline recycling rate: significant positive association (ρ=0.66, p=0.01)

Annex 1: Equity, gender, disability and social inclusion (GEDSI)

1 Short refresher on the evaluation's approach to GEDSI

GEDSI was assessed as a cross-cutting theme, integrated throughout the portfolio analysis and country case studies, in line with the approach set out in the inception report. Evidence was drawn from a desk review of GPAP and NPAP documentation, key informant interviews with policymakers, private sector actors, civil society organisations and NPAP Secretariats, surveys, and targeted interviews with GEDSI specialists. In selected countries, interviews and focus group discussions were conducted with informal waste workers, with particular attention to the experiences of women.

Analysis examined how GEDSI considerations were reflected in GPAP's overall approach in each country. It assessed the extent to which contextual analysis of gender and social inclusion had been undertaken and used to inform NPAP planning and stakeholder engagement. It examined whether and how these considerations were integrated into the design and delivery of national roadmaps, including the ambition and institutionalisation of GEDSI principles within delivery structures. The analysis also considered the extent to which participatory and inclusive approaches were applied in practice, and how these processes translated into the distribution of results and benefits across different social groups.

The table presented at the end of this section presents a short analysis of evidence on GEDSI integration in overall approach, roadmap design and delivery, and participatory and inclusive practice across case study countries, and includes a rating of the level of ambition using Defra's GEDSI scale, ranging from GEDSI-blind to GEDSI-transformative.

2 Findings

2.1 GEDSI analysis and use in NPAP design

Primary EQs:

- EQ2: To what extent does GPAP respond to different contexts?
- EQ5: Has the GPAP programme contributed to improving the recognition, dignity and working conditions of the informal sector?
- EQ15: Have these results been felt equitably within and across GPAP countries? Where variations exist, what has caused those?

Secondary EQ:

- EQ9: Has GPAP and the NPAPs improved evidence-informed policy making and delivery?

The extent and quality of contextual analysis on gender equality and social inclusion varied across NPAPs, influencing how effectively national roadmaps and engagement strategies reflected the needs and priorities of informal workers and marginalised groups. Where such analysis was systematic and explicitly linked to planning processes, it informed strategic direction and stakeholder engagement. Where it was limited or ad hoc, its influence on design was correspondingly weaker. For example, in Mexico City limited contextual analysis and the exclusion of waste picker organisations from roadmap design constrained GEDSI integration, while in Indonesia and Viet Nam studies highlighted gender and informal worker issues but these were not consistently reflected in roadmap targets or implementation mechanisms.

NPAPs that invested in contextual analysis were better positioned to align their priorities with lived realities. In Ecuador, an intersectional study examined how gender, ethnicity, poverty, and geography shaped exposure to pollution and access to livelihoods, and this analysis

informed national advocacy priorities and community-level interventions.[109] In Viet Nam, a gender analysis contributed to roadmap development and task force discussions, supporting more structured consideration of women's roles in the plastics value chain.[110] In Peru, a dedicated GEDSI study highlighted the vulnerabilities and contributions of informal recyclers and informed their inclusion in leadership and working groups.[111] In Ghana, analytical work supported the establishment of an Inclusion Task Force, providing an evidence base for more inclusive governance arrangements, although translation into consistent design and delivery remained uneven.[112] In Mexico City, limited use of contextual GEDSI analysis constrained the extent to which roadmap priorities and engagement strategies reflected the perspectives of informal workers.[113]

2.2 Level of ambition and framing of GEDSI in NPAPs

Primary EQs:

- EQ5: Has the GPAP programme contributed to improving the recognition, dignity and working conditions of the informal sector?
- EQ7: To what extent has GPAP strengthened trust and improved the effectiveness of interventions through public-private consultations?
- EQ15: Have these results been felt equitably within and across GPAP countries? Where variations exist, what has caused those?

Secondary EQs:

- EQ19: To what extent has the circular economy reached market maturity?
- EQ20: Without GPAP support will the existing NPAPs be able to continue to function?

Building on available contextual analysis, NPAPs adopted differing levels of ambition in addressing gender and social inequalities and varied in the extent to which GEDSI considerations were embedded within formal governance structures. Across the portfolio, ambition was generally moderate, with inclusion more often framed instrumentally – linked to system efficiency, coordination, or delivery effectiveness – than as a means of addressing structural inequalities such as labour rights, social protection, or bargaining power.

In Ghana, inclusion of waste pickers in NPAP discussions reflected ambition to improve recognition and voice within sector governance, but limited attention to long-term livelihood security constrained transformative potential.[114] In Viet Nam, technical ambition was evident through studies and task forces, but weak mandates and unclear authority limited translation into institutional reform.[115] In Peru, inclusion of recycler associations in working groups strengthened institutional recognition, although the geographic concentration of engagement limited national reach.[116]

Ecuador stands out for adopting a more explicitly rights-based framing, linking plastics governance to indigenous rights and environmental justice concerns. This reflects relatively higher ambition, although long-term sustainability depends on stronger national-level embedding. In Mexico City, ambition was constrained by political sensitivities, with informal workers largely excluded from strategic processes, limiting institutionalisation.[117]

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[109] Ecuador case study.

[110] Viet Nam case study.

[111] Peru case study.

[112] Ghana case study.

[113] Mexico City case study.

[114] Ghana case study.

[115] Viet Nam case study.

[116] Peru case study.

[117] Mexico case study.

Institutionalisation was strongest where participation of informal worker organisations was formalised within NPAP processes, rather than relying on ad hoc engagement or individual champions. In Ghana, the Inclusion Task Force created a dedicated mechanism for engaging informal workers, while in Peru recycler organisations were formally represented in NPAP leadership and working groups, enabling ongoing participation in roadmap development and implementation discussions..[118] In Viet Nam and Ecuador, participation mechanisms existed but engagement remained uneven, with stronger involvement at national NPAP convenings than in sub-national processes or implementation.[119]

Across GPAP countries, the degree to which GEDSI is embedded in NPAPs – rather than treated as an enabling narrative – is a key determinant of transformative potential. In several roadmaps, inclusion is framed as a cross-cutting principle or enabling condition, rather than embedded directly within the core upstream and downstream system interventions. For example, in Ghana and Indonesia, roadmap structures emphasise technical interventions (e.g. collection expansion, recycling capacity, redesign, financing) with limited specification of how gender and informal worker considerations are operationalised within each intervention stream.[120] This limits the extent to which GEDSI shapes resource allocation, targets, and accountability mechanisms.

By contrast, Ecuador and Peru integrate informal worker inclusion and social protection considerations more directly into intervention logic, linking circular economy objectives with formalisation pathways, working conditions, and recognition within waste systems.[121] The Dominican Republic roadmap goes further in articulating a "just transition" catalyst alongside regulatory and financing reforms, signalling recognition that circularity and equity must advance together.[122] However, even where inclusion is referenced structurally, few roadmaps include gender-responsive budgets, disaggregated targets, or enforcement mechanisms that would translate ambition into binding commitments.

2.3 Inclusiveness of NPAP processes

Primary EQs:

- EQ7: To what extent has GPAP strengthened trust and improved the effectiveness of interventions through public-private consultations?
- EQ5: Has the GPAP programme contributed to improving the recognition, dignity and working conditions of the informal sector?

Secondary EQ:

- EQ11: Has GPAP support contributed to meaningful engagement in negotiations of a global plastics treaty?

NPAPs expanded opportunities for dialogue across the plastics value chain, but the inclusiveness and effectiveness of participation depended on the extent to which engagement was actively facilitated, resourced, and designed to address power imbalances. Where participation relied largely on voluntary or unfunded engagement, inequalities in voice and influence persisted.

Participation processes were strongest where practical barriers were explicitly addressed. In Ecuador, community-level interventions provided childcare, transport, and tailored facilitation, enabling indigenous women and waste pickers to engage consistently in consultations and

[118] Ghana case study.

[119] Viet Nam and Ecuador case study.

[120] Ghana and Indonesia roadmaps.

[121] Ecuador and Peru roadmaps.

[122] Dominican Republic roadmap.

project design.[123] In Peru, structured working groups and formal recognition of recycler associations created regular and predictable entry points for participation.[124] In Ghana, convening practices evolved over time, with increasing attention to inclusive facilitation and representation.[125]

Across countries, structural power asymmetries between government institutions, large private actors, and informal workers shaped participation dynamics. Case studies suggest that while access to dialogue improved in some cases, decision-making authority largely remained with public and corporate actors. For example, in Mexico City, waste picker organisations were excluded from PAP governance due to government opposition, despite parallel efforts to support informal workers through grant-funded initiatives.

2.4 Results: changes in awareness and capacity

Primary EQs:

- EQ5: Has the GPAP programme contributed to improving the recognition, dignity and working conditions of the informal sector?
- EQ14: To what extent has this led to a better quality of life for those directly and indirectly involved in the waste management sector?

Secondary EQ:

- EQ6: How well has GPAP been able to influence the enabling environment for the circular economy?

Participation in GPAP-supported processes contributed to changes in visibility, organisational capacity, and early empowerment of informal workers and marginalised groups, particularly where participation was sustained and linked to institutional engagement. These changes remained uneven and context-dependent.

In Ecuador, community-based projects and collective action initiatives strengthened skills, confidence, and organisational capacity among participants, particularly women and indigenous groups.[126] In Peru, participation in leadership groups increased the visibility of recycler organisations and strengthened their ability to articulate priorities within sector discussions.[127] In Ghana, informal recyclers reported gains in financial literacy and organisational strengthening, supporting more effective engagement with formal actors.[128]

In Viet Nam, awareness of plastic pollution and collective responsibility increased, but direct capacity-building for informal workers remained limited.[129] In Mexico City, restricted participation constrained improvements in recognition and organisational capacity among waste picker organisations.[130]

These patterns indicate that participation alone was insufficient to deliver sustained empowerment without continued institutional engagement and targeted capacity-building.

2.5 Results: equity of results and who benefits

Primary EQs:

[123] Ecuador case study.
[124] Peru case study.
[125] Ghana case study.
[126] Ecuador case study.
[127] Peru case study.
[128] Ghana case study.
[129] Viet Nam case study.
[130] Mexico City case study.

- EQ15: Have these results been felt equitably within and across GPAP countries? Where variations exist, what has caused those?
- EQ14: To what extent has this led to a better quality of life for those directly and indirectly involved in the waste management sector?

Secondary EQs:

- EQ10: Has GPAP involvement led to increased investment that might not otherwise have been invested?
- EQ17: What has worked well and not so well? Overall, has GPAP been good value for money?

The distribution of benefits across gender and social groups appears to have varied across countries, reflecting differences in governance arrangements, delivery processes, and the targeting of community-level support. Benefits were strongest where GEDSI considerations were embedded across design, delivery, and governance, and weakest where structural and political barriers limited participation.

In Ecuador, sub-grant-funded projects reached indigenous people, migrants, women, and people with disabilities, improving skills, organisation, and working conditions.[131] In Peru, training, access to credit, and provision of protective equipment supported productivity and incomes among informal workers.[132] In Ghana, support initiatives improved access to basic resources and services, although coverage remained limited relative to need.[133]

In Viet Nam, geographic concentration of activities restricted equitable coverage.[134] In Mexico City, exclusion from governance and market power imbalances continued to limit benefits for waste pickers.[135] Across the portfolio, weak and inconsistent use of disaggregated monitoring data constrained systematic assessment of distributional impacts and limited opportunities for adaptive management.

The design of financing mechanisms is a critical determinant of whether NPAP-supported transitions deliver equitable outcomes. Across the portfolio, financing frameworks rarely incorporate clear equity safeguards or targeted inclusion mechanisms, increasing the risk that system-change investments reproduce existing inequalities rather than reduce them.

Several NPAPs, including Nigeria, Panama, Pakistan, and the Dominican Republic, identify unlocking sustainable finance, EPR, and private investment mobilisation as central catalysts for system change.[136] However, most roadmaps do not specify how these financial flows will reach informal workers or marginalised groups, nor how safeguards will be applied to prevent market consolidation that displaces vulnerable actors.

Where EPR schemes or formalisation pathways are introduced without explicit protections, increased regulatory compliance and capital requirements are likely to favour larger formal enterprises, potentially marginalising small-scale collectors and women-led micro-enterprises. Although Ecuador and Peru more clearly recognise informal recyclers as system actors within financing and policy discussions, operational provisions for income stabilisation, social protection, and access to affordable credit remain limited across the portfolio.[137]

[131] Ecuador case study.

[132] Peru case study.

[133] Ghana case study.

[134] Viet Nam case study.

[135] Mexico City case study.

[136] Nigeria, Panama, Pakistan and Dominican Republic roadmaps.

[137] Ecuador and Peru roadmaps.

2.6 Monitoring, targets and accountability for GEDSI

Across the NPAP portfolio, monitoring frameworks prioritise material and technical performance while largely neglecting measurable commitments on gender equality and social inclusion. This imbalance limits accountability for equitable outcomes and weakens the ability to assess whether system-change benefits are being fairly distributed.

Most roadmaps include quantitative targets for leakage reduction, recycling rates, or circularity, such as Indonesia's 70% marine leakage reduction target and the Dominican Republic's ambition to increase circularity from 6% to 53% by 2040.[138] However, equivalent targets related to labour formalisation, income security, gender representation, or social protection are generally absent. Metrics systems therefore focus primarily on material flows, infrastructure expansion, and economic efficiency.

Indonesia's Metrics roadmap emphasises baseline consolidation, leading indicators, and improved reporting on waste flows, but does not include social inclusion indicators within its core objectives.[139] Similarly, Ghana, Viet Nam, and Mexico City prioritise system-change modelling and technical targets without embedding gender-disaggregated monitoring requirements.[140]

The Dominican Republic roadmap demonstrates stronger intent by referencing a "just transition" and establishing a Gender and Social Inclusion working group. However, even in this case, social commitments are not systematically linked to headline circularity targets or integrated into performance frameworks.[141] As a result, where monitoring remains predominantly material-flow focused, social outcomes risk being treated as secondary or assumed spillover effects rather than core objectives.

[138] Indonesia and Dominican Republic roadmaps.

[139] Indonesia roadmap.

[140] Ghana, Viet Nam and Mexico City roadmaps.

[141] Dominican Republic roadmap.

Table A2.1: GEDSI integration in case study countries

Country name	Evidence of GEDSI integration into overall approach to GPAP's work	Evidence of GEDSI considerations being integrated into the design and delivery of the roadmap for that country	Evidence of participatory/inclusive approaches	GEDSI rating: GEDSI-blind (grey) GEDSI-sensitive (yellow) GEDSI-empowering (light green) GEDSI-transformative (dark green)
Peru	GEDSI is explicitly integrated into GPAP's overall approach in Peru through both analytical work and targeted support to informal workers. The NPAP Peru commissioned and published a Gender Equity and Social Inclusion (GEDSI) analysis of the plastics value chain, the first such study among Latin American NPAPs, which examined gendered and social vulnerabilities, with a specific focus on informal waste workers and women recyclers. Informal recyclers are recognised as "key actors" in the plastics system and are formally included within NPAP governance structures, including representation in the leadership group and participation in working groups. Beyond analysis, GPAP has directly funded GEDSI-relevant interventions. Through the Informal Initiative grants, GPAP-supported Sinba to implement activities benefiting 51 informal workers (20 women, 31 men), including access to PPE, financial literacy training, credit, organisational strengthening, and women-only support circles. This demonstrates that GEDSI is operationalised through both evidence generation and resource allocation.	GEDSI considerations are embedded in both the design and early delivery mechanisms of the NPAP Roadmap. The roadmap explicitly integrates findings from the GEDSI study and identifies informal selective collection, formalisation, and social inclusion as critical to achieving plastics circularity targets. Informal recyclers, including women recyclers, participated in roadmap development through technical and thematic working groups, and their perspectives were incorporated into the final document despite participation constraints linked to work schedules and informality. At the delivery stage, GEDSI is reflected structurally through the establishment of a dedicated "Social Inclusion & Just Transition" working group to support implementation of roadmap priorities. Additionally, evidence from the GEDSI study has been taken up beyond the NPAP itself: the Ministry of Environment and Sinba are using its findings to inform a national strategy on recyclers, indicating that GEDSI analysis is influencing real policy design and delivery processes.	Participatory and inclusive approaches have been systematically applied throughout NPAP Peru's processes. The NPAP convened stakeholders across government, private sector, civil society, academia, and informal recyclers during the development of the roadmap and supporting technical studies. A dedicated GEDSI working group supported the GEDSI study through interviews with vulnerable groups across three regions and through multi-stakeholder workshops to validate findings and integrate feedback. The roadmap was validated and formally endorsed by a wide range of actors at its launch, including recyclers' associations, private companies, and government institutions, signalling consensus-building through inclusive consultation. In addition, NPAP-led dissemination events (e.g. GEDSI study launches, recycling plant visits, public festivals) were used as entry points to engage informal workers and amplify their visibility within national plastics governance.	Gender-transformative

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			While participation has been more concentrated in Lima and engagement of recyclers in remote regions remains limited, the evidence indicates deliberate and repeated use of participatory mechanisms rather than one-off consultation.	
Ecuador	GEDSI is integrated into GPAP's overall approach in Ecuador through the deliberate inclusion and recognition of informal workers, particularly waste pickers, as central actors in the plastics system. From the outset, the NPAP was designed to be multi-stakeholder, reflecting how plastics governance operates in practice, rather than privileging only formal institutions. Waste picker organisations, civil society groups, and social enterprises such as RECIVECI and Huella Verde have been represented in NPAP processes, studies, and communications. GPAP-supported analytical work explicitly acknowledges differentiated impacts of plastic pollution on women, indigenous communities, and vulnerable groups, moving beyond a purely technical framing of plastics. This approach positions plastic pollution as both an environmental and social justice issue and embeds equity considerations	GEDSI considerations have been explicitly integrated into both the design and delivery of Ecuador's Roadmap for Action on Plastics. Gender and social inclusion was identified as one of the five priority areas following the roadmap's development, demonstrating intentional sequencing rather than add-on inclusion. The roadmap is underpinned by a dedicated gender and social inclusion study that applies an intersectional lens across the full plastic value chain, including production, consumption, and waste management. This study highlights gendered labour roles, health impacts on women waste pickers, the burden of plastic pollution in indigenous and peripheral territories, and risks linked to state consumption policies. GEDSI findings and indicators were validated through NPAP workshops and are now positioned to inform Ecuador's legally binding National Plan for Plastic Waste Reduction, embedding social	Participatory and inclusive approaches have been consistently used in Ecuador's GPAP implementation. Roadmap development and subsequent studies involved government ministries, municipalities, private sector actors, academia, waste picker organisations, NGOs, and community representatives. Inclusive methodologies were applied in the gender study, including focus groups with waste pickers, interviews across the value chain, ethical safeguards to avoid re-traumatisation, and validation workshops where findings were collectively reviewed and refined. Sub-national and community-level initiatives, such as the Zero Waste project in Imbabura, further demonstrate participatory design through co-creation with indigenous organisations, provision of childcare	Gender-transformative

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	within national plastics governance discussions.	considerations into formal policy frameworks.	to enable women's participation, and collaboration with national waste picker alliances. While power imbalances remain, the NPAP has significantly expanded who participates in plastics governance in Ecuador and how their knowledge is valued.	
Ghana	GEDSI considerations were substantively integrated into GPAP's overall approach in Ghana, particularly through deliberate inclusion of informal waste workers and attention to gendered labour dynamics within the plastics value chain. GPAP explicitly recognised that Ghana's plastics economy is highly dependent on informal recovery systems, where women constitute a significant proportion of the workforce, estimated at around 31%, often concentrated in lower-value roles. The establishment of the NPAP Inclusion Task Force marked a clear departure from	GEDSI considerations were integrated into the design of Ghana's National Plastic Action roadmap through dedicated analytical inputs, including gender and social inclusion assessments that informed priority setting and intervention design. The roadmap explicitly acknowledged the role of informal workers and the gendered segmentation of the plastics value chain, and it incorporated recommendations aimed at improving inclusion in policy discussions, market access, and working conditions. Design elements reflected an	Participatory and inclusive approaches were a defining feature of GPAP's work in Ghana, particularly through the NPAP's multi-stakeholder governance and engagement processes. NPAP documentation records engagement with over 300 stakeholders across government, private sector, civil society, academia, and the informal sector, with informal waste pickers participating directly in task forces and policy discussions. This inclusion altered participation	Gender-empowering

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	pre-GPAP practice, where informal waste pickers were largely excluded from national policy processes. Through NPAP, informal workers were formally recognised as stakeholders and included in dialogue on plastics governance, circular economy transitions, and Extended Producer Responsibility (EPR). However, while procedural inclusion improved significantly, material outcomes, particularly for women, remain uneven, with persistent gendered income disparities and limited occupational protections, indicating that integration has been stronger at the level of participation and recognition than redistribution of power or resources.	understanding of intersectional vulnerabilities, particularly the concentration of women in lower-value segments and the exclusion of informal workers from regulatory and financing mechanisms. In delivery, however, implementation of gender-specific and inclusion-focused actions has been partial and inconsistent. While some progress was observed such as improved recognition of informal workers in policy debates and selective provision of basic protections, the translation of roadmap commitments into sustained, gender-responsive interventions has been constrained by NPAP's non-statutory status, limited resources, and reliance on external actors for implementation. As a result, GESI integration is stronger at the strategic and design level than in consistent, system-wide delivery.	dynamics by bringing lived experience into national-level decision-making forums, especially on issues such as EPR design and circular economy initiatives. Concrete participatory outcomes included the mapping of waste picker organisations and support for cooperative formation, which strengthened collective voice and negotiating power in some urban contexts. However, while participation was broad and meaningful at the procedural level, benefits were uneven across regions and groups, with most gains concentrated in Accra and surrounding areas. The evidence suggests strong participatory processes, but limited mechanisms to ensure that participation translated into sustained economic or social gains for the most marginalised participants, particularly women.	
Nigeria	GEDSI considerations are integrated into GPAP's overall approach in Nigeria primarily through deliberate inclusion of informal workers within NPAP processes and through direct grant funding targeted at informal worker support. The NPAP process elevated the visibility of informal	The roadmap recognises informal workers as essential actors within Nigeria's plastics system and incorporates inclusion considerations in its narrative framing. Baseline data development helped build a shared understanding of the scale of plastic	Participatory and inclusive processes were a defining feature of the NPAP Roadmap phase. Over 100 stakeholders participated during the peak consultation period, including representatives from government, private sector, civil society, SMEs,	GEDSI-empowering

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	workers – including women – within plastics governance discussions and provided unprecedented access to federal government representatives, producers, and large corporations. Stakeholders widely acknowledged that informal workers' contributions were valued and that their perspectives meaningfully influenced roadmap discussions, including on EPR. Nigeria received the largest number of GPAP informal worker grants across the portfolio, supporting activities such as PPE provision, financial and business training, health and safety training, recycling hubs, and access to subsidised health insurance. These interventions are highly relevant in a context where informal workers face income precarity, stigma, health risks, and policy threats (e.g. bans and closures affecting waste pickers). However, GEDSI integration remains uneven and fragile. The NPAP has faced institutional disruptions, including a six-month pause due to host transition, which weakened momentum and credibility. While procedural inclusion improved, systemic transformation of working conditions, labour protections, or gendered income disparities has been	waste and the role of informal systems, even if data reliability remains contested. However, the roadmap lacks a detailed implementation plan, monitoring framework, or clear institutional mandates for advancing GEDSI objectives. Post-roadmap delivery has been weak, with task forces lacking authority, clear responsibilities, or accountability mechanisms. No gender-responsive targets or systematic monitoring of labour or social outcomes are embedded within implementation structures. As a result, GEDSI integration is stronger at the design and consultative stages than in sustained delivery. Grant-funded interventions demonstrate more tangible delivery-level GEDSI integration but vary widely in design quality, cost efficiency, and reporting robustness. Some projects report improved income, access to banking, and reduced health risks; others provide limited evidence of sustained impact. Weak monitoring and inconsistent reporting constrain assessment of	and informal workers. The presence of the federal government added legitimacy and increased pressure for accountability. Informal workers reported that their engagement improved recognition and provided direct channels to influence policy discussions. However, participation declined significantly following the host transition, and sustained engagement mechanisms remain weak. Informal workers' participation has been largely consultative rather than decision-making. Geographic gaps persist, particularly limited engagement with state governments (e.g. Lagos, Abuja), which constrains systemic impact. While procedural inclusion has been meaningful, translation into durable institutional reform and material improvements remains limited.	

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	limited. The broader policy environment includes measures that undermine informal workers, such as restrictions on waste picking in some areas, illustrating limited structural embedding of GEDSI principles.	distributional outcomes across gender and vulnerable groups.		
Philippines	GEDSI considerations are partially integrated into GPAP's overall approach in the Philippines, primarily through recognition of informal waste workers as legitimate stakeholders within plastics governance and through the commissioning of a GESI study to inform roadmap development. The NPAP platform created a new convening space in a previously fragmented sector and provided informal worker associations – many of which are newly organised – with access to the Department of Environment and Natural Resources (DENR), private sector actors, and civil society organisations. Stakeholders interviewed expressed strong appreciation for the opportunity to voice concerns and contribute to discussions that had historically excluded them. However, GEDSI integration remains more consultative than structural. Informal workers are represented in consultations and discussions, and direct grant funding has supported 128 informal	The draft Action roadmap explicitly identifies improving conditions and integrating informal workers as a priority area and recognises differentiated vulnerabilities, particularly among women informal workers. The GESI study was considered an important awareness-raising input and contributed to ensuring that vulnerability and inclusion considerations were reflected in the roadmap narrative. However, integration remains high-level and largely aspirational. The roadmap does not yet include gender-responsive targets, disaggregated monitoring indicators, budget allocations, or clearly defined institutional responsibilities for advancing GEDSI objectives. Informal workers were consulted during roadmap development and provided feedback, but the consultation process was described as relatively light-touch and insufficiently deep to shape detailed design. Delivery remains at an early stage, with limited evidence that GEDSI commitments have	Participatory approaches have been a strong feature of the Philippine NPAP process. Over 100 stakeholders attended initial consultations, and working groups (Metrics, Flexible Plastics, Upstream) were established early to operationalise elements of the roadmap. The consultative process was widely perceived as transparent and effective in building consensus across traditionally adversarial actors, particularly between civil society and industry. Informal worker associations interviewed were positive about their involvement, highlighting improved visibility, networking opportunities, and direct access to policymakers. However, participation was uneven. Some actors chose not to engage, and concerns were raised about industry dominance in discussions. Informal worker engagement has been more	GEDSI-sensitive

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	workers through community-level initiatives. Yet informal worker organisations are not embedded within formal NPAP governance structures to the same degree as in higher-performing GEDSI contexts. The overall framing of inclusion is primarily linked to coordination, fairness, and stakeholder dialogue rather than structural transformation of labour conditions, income security, or gendered power dynamics within the plastics value chain.	translated into systematic implementation measures.	meaningful in dialogue than in decision-making authority, and structural inclusion within governance remains limited.	
Indonesia	Overall, GEDSI integration in Indonesia is partial and largely conceptual rather than operational. GPAP-supported NPAP work in Indonesia recognises gender equality and social inclusion at a narrative level, particularly through the NPAP Roadmap, Financing Roadmap, and the Plastics Sector Social Context Assessment, which acknowledge gendered inequalities and the central role of informal waste workers in the plastics value chain. Informal workers are recognised as critical actors whose safety, dignity, and working conditions require attention. However, this recognition has not translated into a systematic or strategic focus within NPAP activities. There is no dedicated GEDSI task force, no clear inclusion strategy, and limited evidence that informal workers' voices	GEDSI considerations are present in roadmap design but weakly reflected in delivery and implementation. Several NPAP roadmaps – including the Multi-stakeholder Action Plan, Financing roadmap, Behaviour Change roadmap, and the Plastics Sector Social Context Assessment – explicitly acknowledge gender inequality, social exclusion, and the differentiated impacts of plastic pollution on women and informal waste workers. This demonstrates awareness of GEDSI issues at the design stage. However, evidence from interviews and implementation reviews indicates that these roadmaps remain largely strategic and aspirational, are not legally anchored, and are seldom used to guide operational decision-making. There are no gender-responsive targets, indicators, or	Participation is strong at an institutional level, but social inclusion is uneven and limited. The NPAP has adopted participatory approaches by convening over 120 stakeholders across government, private sector, civil society, and development partners through consultations, working groups, and roadmap processes. This demonstrates robust multi-stakeholder participation and coordination. However, participation is geographically concentrated in Jakarta and dominated by large corporations, industry associations, and international actors. Informal waste workers, community-based organisations, SMEs, and sub-national stakeholders remain	Gender-sensitive

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	meaningfully influence NPAP priorities or decision-making, indicating that GEDSI remains peripheral to GPAP's overall approach in Indonesia.	monitoring mechanisms embedded in roadmap implementation, and no dedicated structures (such as a GEDSI task force or working group) to translate commitments into practice. Furthermore, despite recognition of informal waste workers' importance in the plastic value chain, there is no evidence of their structured engagement in roadmap delivery, nor of systematic inclusion of women or marginalised groups in implementation processes, limiting the practical integration of GEDSI in delivery.	underrepresented, indicating that while participatory processes exist, they fall short of being fully inclusive from a GEDSI perspective.	
Vietnam	GEDSI considerations are integrated into GPAP's overall approach in Viet Nam primarily through evidence generation, governance structures, and agenda setting, rather than through direct service delivery or large-scale implementation. The Viet Nam NPAP explicitly recognises that plastic pollution and waste management systems rely heavily on informal (referred to as "independent") waste workers, many of whom are women and migrants facing income precarity, health risks, and social stigma. This recognition is grounded in the Intersectional Gender Context Assessment of the Plastic Value Chain (2023), which analyses gendered divisions of labour, occupational risks, and exclusion from decision-making. GPAP-	GEDSI considerations are strongly embedded in the design of the Viet Nam NPAP Roadmap but weakly reflected in its delivery. The roadmap draws directly on the Gender Context Assessment and acknowledges differentiated gender impacts across the plastics value chain, particularly in relation to health and safety risks, unpaid and low-paid labour, and exclusion of informal workers from policy processes. Social inclusion is treated as a cross-cutting system issue rather than a standalone theme, signalling conceptual integration at the design stage. However, the roadmap does not include gender-responsive targets, budgets, or monitoring indicators, nor does it clearly assign institutional responsibility for implementing GEDSI-	Participatory and inclusive approaches are a defining feature of the NPAP model in Viet Nam, but inclusion remains uneven in practice. The NPAP convenes over 200 organisations across government, private sector, civil society, academia, and international agencies. Governance mechanisms such as the Leadership Board, expert groups, and thematic task forces, including a dedicated GEDSI task force, create formal entry points for diverse perspectives. Inclusive practices are also evident in public-facing activities such as the Plastic Talks Series, including sessions focused on informal waste workers with the participation of	Gender-sensitive

Country name	Evidence of GEDSI integration into overall approach to GPAP's work	Evidence of GEDSI considerations being integrated into the design and delivery of the roadmap for that country	Evidence of participatory/inclusive approaches	GEDSI rating: GEDSI-blind (grey) GEDSI-sensitive (yellow) GEDSI-empowering (light green) GEDSI-transformative (dark green)
	supported processes have also sought to improve recognition and dignity, including proposing alternative terminology for informal waste workers and increasing their visibility through consultations, studies, and public forums. However, while GPAP has enabled dialogue and legitimacy around gender and informality, there is limited evidence that these efforts have yet translated into structural improvements such as formalisation pathways, labour protections, or social security for women waste workers.	related actions. Moreover, there is limited evidence that NPAP activities are systematically guided by the roadmap, resulting in GEDSI commitments remaining largely aspirational. GEDSI-related actions that have occurred, such as small pilot projects, consultations, and UNDP-led initiatives involving informal workers, are fragmented and small in scale, making it difficult to assess sustainability or longer-term outcomes.	women waste workers themselves, a group that rarely accesses national policy forums. At the same time, participation is geographically concentrated in Hanoi, limiting meaningful engagement of grassroots actors and informal workers from other regions. Informal workers' participation remains largely consultative rather than decision-making, and hybrid formats, while expanding access, are less effective for marginalised groups. As a result, participatory processes have strengthened visibility and recognition but have yet to substantially shift power or influence policy outcomes for women and informal workers.	
Mexico City	GEDSI considerations are partially integrated into GPAP's overall approach in Mexico City, with a clear recognition of informal waste workers, particularly women, as a vulnerable and central group in the plastics value chain. The Action roadmap explicitly identifies "improving conditions and integrating informal workers" as a priority action area, and GPAP has channelled direct funding through Informal Initiative grants to support informal workers (128 workers supported) via organisations such as	GEDSI is explicitly referenced but weakly operationalised in the design and delivery of the Action roadmap. While gender and social inclusion are named as cross-cutting priorities and the roadmap acknowledges differentiated vulnerabilities (e.g. women informal workers' reduced access to resources and leadership), the roadmap largely remains high-level and lacks concrete, targeted GEDSI measures or implementation pathways. Moreover, informal workers were excluded from the	Participatory approaches have been used unevenly. The PAP convenes a diverse set of stakeholders across government, private sector, civil society and academia, and working groups (e.g. Innovation & Technology, Financing) have enabled dialogue and learning. However, the Action roadmap itself was consultant-led and not participatory, with stakeholder inputs incorporated only post-hoc during socialisation workshops. Crucially, informal	Gender-sensitive

Country name	Evidence of GEDSI integration into overall approach to GPAP's work	Evidence of GEDSI considerations being integrated into the design and delivery of the roadmap for that country	Evidence of participatory/inclusive approaches	GEDSI rating: GEDSI-blind (grey) GEDSI-sensitive (yellow) GEDSI-empowering (light green) GEDSI-transformative (dark green)
	Sikanda, Entreamigos, and Ecolana. However, systemic inclusion is constrained, as informal waste picker associations are not formally included in the PAP due to government resistance.	roadmap design process, and their inclusion occurs only indirectly through annexed initiatives or externally funded pilots, rather than through the core roadmap architecture.	waste workers and their associations were excluded from participatory spaces due to government opposition, representing a significant gap in inclusive practice, despite GPAP's parallel efforts to support community-level participation through grant-funded projects.	

Annex 2: Informal plastic waste worker survey analysis

1 Introduction

Plastic pollution is one of the most pressing environmental challenges at a global level. In this context, the Global Plastic Action Partnership (GPAP) has emerged as an international platform seeking to reduce this pollution and improve the circularity of plastic waste. A fundamental pillar of this initiative is the recognition of the crucial role played by informal sector workers, including collectors, sorters and recyclers, who, despite their significant contributions, often find themselves in situations of high vulnerability, lack of labour protection and social stigmatisation.

This research exercise forms part of the external evaluation of the GPAP programme, carried out by Itad. Given that the programme is still in an early phase and its benefits have not yet been widely realised, this survey does not aim to measure GPAP's direct impact, but rather to obtain an in-depth understanding of the social profile, working conditions, livelihoods and perceptions of informal plastic waste workers in three countries with very different socioeconomic realities and waste management contexts: Viet Nam, Ecuador and Ghana. The findings of this study will provide context and inform recommendations that the GPAP programme may implement to support this key population more effectively.

In the next section, an overview of the general and specific objectives of this survey report are introduced. Then, the methodology (including sample, data collection and analysis, limitations) is presented. Section 4 discusses the results. This report finalises with some conclusions.

2 Objectives

The general objective is to characterise the socio-economic profile and understand the current working conditions of informal plastic waste collector workers in Viet Nam, Ecuador and Ghana, as part of the evaluation of the GPAP programme.

The main specific objectives are the following:

1. To describe the demographic profile (age, gender, education, migration status, disability) of informal recyclers in the three countries.
2. To analyse work patterns, including the level of dedication to the activity (main source of income, years of experience, seasonality) and other complementary activities within the plastic waste value chain.
3. To assess the dynamics of plastic waste supply, such as estimated volume, types of plastic collected, perceptions of changes in the amount available, and access to tools, equipment and storage.
4. To examine the dynamics of plastic waste demand, including changes in volume and prices, bargaining power and membership in workers' associations.
5. To estimate the income derived from waste management and other economic activities.
6. To identify the type of assistance or support received from organisations or individuals, like training, healthcare and protective equipment, and the importance it had for these workers.
7. To detect any other context specific issues that may influence the effectiveness of future interventions.

3 Methodology

3.1 Study design

This is a cross sectional, descriptive and comparative study based on a structured quantitative survey administered to a sample of informal waste workers in three countries.

3.2 Population and sample

The target population was informal workers aged 18 or over engaged in waste collection (in landfills, streets, households or businesses), provided that at least a portion of the waste they collect is plastic.

The target sample size was set at around 200 valid responses per country, limited by the available budget. The sample size calculation was carried out assuming an infinite or unknown population size, with a 95% confidence level and a ±7% margin of error for proportion estimates. The standard formula for infinite populations was applied:

$$n = \frac{Z^2 \cdot p \cdot q}{e^2}$$

where $Z = 1.96$ (95% confidence), $p = q = 0.5$ (maximum variability), and $e = 0.07$.
Using these values, the formula gives a required sample of about 196 individuals.

The final sample obtained by country was as follows:

- Viet Nam: A total of 200 surveys were obtained across several locations in the capital city of Hanoi. The response rate was 83%, as 241 workers were approached and 41 rejected participating.
- Ecuador: an effective sample of 197 surveys was obtained across five different areas in the Metropolitan District of Quito (La Delicia, Quitumbe, Cumandá, Romerillos, and Tumbaco). The effective response rate was 100% among contacted workers who met the eligibility criteria.
- Ghana: a total of 221 surveys were collected at two sites in the Greater Accra region: La-Dadekotopon Material Recovery Facility and Kpone Landfill site. According to the field report, 230 workers were contacted and all agreed to be interviewed. However, two of them became unavailable, resulting in a 99% response rate. Another seven were later dropped because they had been employed in the sector for less than a year.

3.3 Data collection tool

A structured questionnaire was designed and translated into the local languages of each country (Twi, Ga and Ewe in Ghana; Spanish in Ecuador; Vietnamese in Viet Nam). The questionnaire includes the following sections:

- Initial filter question: To ensure that the respondent collects plastic.
- Demographic data: gender, age, education, disability, migration status, location and role (collector/recycler).
- Section B: Work patterns: main source of income, years of experience, other activities in the waste chain, months worked per year.
- Section C: Plastic collection: percentage of plastic collected, types of plastic, perceived change in the amount collected, access to storage facilities and tools/equipment, perceived change in working conditions and public attitudes.
- Section D: Selling plastic: perceived change in demand and price, confidence in negotiating prices, membership in associations and their benefits.

- Section E: Income: income earned in the past month from waste management and from other activities.
- Section F: Assistance or support received, including financial training, healthcare support and protective equipment, as well as the importance attributed to these forms of support and their providers.

3.4 Data collection process

Data collection was carried out by survey teams from local companies/organisations in each country: Mekong Economics in Viet Nam, Fundación FARO in Ecuador, and Participatory Development Associates in Ghana. Enumerators were trained in research ethics, questionnaire administration and its translation into local languages.

Surveys were administered in person by enumerators, who recorded the responses (on paper in Viet Nam and digitally in Ghana and Ecuador, using the KoboCollect and ODK/Kobo apps respectively). All participants were informed about the confidentiality of their responses and the handling of their personal data and gave explicit consent to participate. They were offered a "Prefer not to answer" option for all questions and were informed that could stop the survey at any time. In all cases, the surveys were conducted during several days in the second half of January/ beginning of February 2026. An initial pilot phase took place at the beginning of this period in the three countries, and the survey tool was consequently adjusted. The surveys collected at the pilot stage were also included in the final survey responses.

Informal workers that participated in the survey were financially compensated for their time at the end of it in all countries.

For quality control, measures included field supervision, daily data review, digital data synchronisation (in Ghana), and follow-up telephone audits (in Ecuador).

3.5 Data analysis

An initial descriptive analysis was conducted to characterise the sample. Quantitative variables –including age, income, and years of experience –were summarised using means and their corresponding standard deviations (SD). Qualitative variables, such as gender, educational level, and association membership, were presented as absolute frequencies and percentages. In instances where the sample size within specific categories was small, categories were merged to ensure analytical robustness. For example, educational level was grouped into broader categories (non-formal/primary vs secondary/higher).

Likert-type questions were analysed using a dual approach. First, they were treated as categorical variables to capture distributional patterns across response options. Second, they were analysed quantitatively by assigning numerical values from 1 to 5, thereby enabling the calculation of summary statistics and facilitating their inclusion in inferential tests.

For the inferential analysis, comparisons of means between two independent groups (such as income by gender) were performed using Student's t-test. Prior to each t-test, the assumption of homogeneity of variances was assessed using Levene's test. When the comparison factor had more than two categories (e.g. country), one-way ANOVA was used. Associations between qualitative variables (e.g. country and perceived improvement in working conditions) were examined using Pearson's Chi-square test.

In the Income Results section, a logistic regression model is included. It tested whether, across countries, the income (from waste activities and total) was associated with factors such as gender, education level, age group, or association membership. When income values were missing, an average per country was applied. First, as the currency differs by country, the income variable was transformed into quartiles (high, medium, low). The high quartile (representing the 25% higher bracket) was used for the analysis. Therefore, the regression

model's dependent variable was set to 1=Belonging to higher income bracket; 0=otherwise. The independent variables were all treated as categorical variables.

All statistical analyses were carried out using R statistical software (RStudio 2026.01.1), applying a significance level of α=0.05.

3.6 Limitations

When interpreting the results of this study, several methodological and contextual limitations should be considered. First, although the target sample size (≈196 respondents per country) was statistically justified for a ±7% margin of error, it was partly determined by the available budget. As a result, the precision of estimates is limited, particularly for more granular analysis.

Data collection in each country was carried out in a limited number of sites, which may not reflect the full diversity of informal waste workers within each country. Also, the survey relies on self-reported data, which may be difficult to accurately recall. The field reports indicate that seasonality heavily influences both worker availability and the volume of plastic waste, for example rainy season or the Chinese New Year, which affects plastic demand. Therefore, responses may reflect short-term seasonal conditions rather than fixed realities.

In Ghana, workers with less than one year of experience were excluded from the sample, leading to underrepresentation of newer workers. In Viet Nam, the structured tool did not capture informal secondary livelihoods (domestic work, vending, farming), even though these emerged in field conversations and significantly affect household income strategies. There are also other factors that this survey did not explore and may be important for informal workers' livelihoods and wellbeing, such as power dynamics and social norms, the impact of regulatory changes, or broader market shocks.

Despite the training of enumerators by the survey teams, the field reports show that complex or retrospective questions (e.g. those exploring changes over 2–3 years) were cognitively demanding, particularly in Ecuador. As a result, enumerators sometimes simplified questions, potentially introducing variation in how respondents interpreted them. Also in Ecuador, it was mentioned that some workers feared losing social benefits when asked about their income, pointing at an increasing risk of underreporting or evasive answers.

The surveys were administered in the local languages and then translated to English for analysis and reporting. Therefore, it is possible that some meaning may have been lost or misinterpreted in the process.

4 Results

The results show important differences between the three countries (Viet Nam, Ecuador and Ghana) regarding the demographic profile of the informal plastic waste worker, their working conditions, perceptions, and access to associations, equipment and other support.

4.1 Characteristics of the population and work patterns

The composition of the sample reveals very different sociodemographic and occupational profiles. In Viet Nam, women clearly predominate (86.5%), the population is notably older (50.5% aged 46–60 and 31.5% over 60), and educational levels are higher (78.5% secondary and higher education). In addition, only 54.2% consider plastic collection to be their main source of income, which suggests greater economic diversification or complementarity with other activities.

By contrast, Ghana shows greater presence of men (58.8%), the population is much younger (35.3% aged 18–30 and 37.6% aged 31–45), and almost all respondents (95.9%) are migrants, with plastic collection being the main source of income for 93.7% of them. Ecuador falls in an

intermediate position regarding gender (69% women) but stands out for having the highest percentage with only primary education (48.2%) and the highest prevalence of disability (8.6%).

Table A3.1 Characteristics of the population and work patterns, by country

	Total	**Viet Nam**	**Ecuador**	**Ghana**		
Qualitative	n (%)	n (%)	n (%)	n (%)	X^2	p
Main income source	494 (79.9%)	109 (54.2%)	178 (90.4%)	207 (93.7%)	119.9	<0.001
Women	400 (64.7%)	173 (86.5%)	136 (69.0%)	91 (41.2%)	96.8	<0.001
Education level						
No formal/primary	204 (33%)	36 (16.5%)	137 (48.2%)	139 (34.4%)		
Secondary/higher	299 (48.3%)	157 (78.5%)	60 (25.7%)	82 (37%)	133.7	<0.001
People with any disabilities	27 (4.4%)	4 (2%)	17 (8.6%)	6 (2.7%)	26.2	<0.001
Migrant population	387 (62.6%)	167 (83.5%)	8 (4.1%)	212 (95.9%)	95.8	<0.001
Age groups						
18-30	124 (20.1%)	3 (1.5%)	43 (21.8%)	78 (35.3%)		
31-45	181 (29.3%)	33(16.5%)	65 (33.0%)	83 (37.6%)		
46-60	199 (32.2%)	101 (50.5%)	46 (23.4)	52 (23.5%)		
60+	114 (18.4%)	63 (31.5%)	43 (21.8%)	8 (3.6%)	154.2	<0.001
Types of waste collected						
Glass	148 (23.9%)	30 (15%)	68 (34.5%)	50 (22.6%)	21.1	<0.001
Paper	461 (74.6%)	192 (96%)	180 (91.4%)	89 (40.3%)	214.9	<0.001
Electronic waste	306 (49.5%)	108 (54%)	40 (20.3%)	158 (71.5%)	111.6	<0.001
Organic waste	91 (14.7%)	23 (11.5%)	10 (5.1%)	58 (26.2%)	39.6	<0.001
Cans	36 (5.8%)	16 (8%)	2 (1%)	18 (8.1%)	12.2	0.002
Metals/scrap	92 (14.9%)	31 (15.5%)	55 (27.9%)	6 (2.7%)	52.3	<0.001
Hazardous	127 (20.6%)	28 (14%)	8 (4.1%)	91 (41.2%)	95.6	<0.001
Other	28 (4.5%)	1 (0.5%)	24 (12.2%)	3 (1.4%)	39.3	<0.001
Quantitative	mean (SD)	mean (SD)	mean (SD)	mean (SD)		p
No. types of waste	3.1 (1.3)	3.1 (1.0)	3.0 (1.0)	3.1 (1.3)		0.29
Length in employment	11.2 (10.2)	11.6 (7.5)	15 (11.7)	7.3 (7.1)		<0.001
Months worked in a year	10.2 (2.5)	9.8 (2.9)	10.8 (2.5)	10.1 (2.1)		0.001

These profiles hint at very different social contexts: Viet Nam with older women collectors, Ghana with a young migrant population, and Ecuador with a group with a lower educational level and higher health vulnerability.

Regarding other types of waste collected in addition to plastics, Ghana stands out for a higher proportion of electronic waste (71.5%) and hazardous waste (41.2%), while Viet Nam and Ecuador collect much more paper (96% and 91.4% respectively). The average number of waste types is similar (~3.1), but years worked are notably higher in Ecuador (15 years) compared with Ghana (7.3 years), which may reflect greater work stability or lower turnover in the sector in Ecuador.

Besides collection, informal workers were asked to select another waste activity in which they are involved. There are important and significant differences across countries. In Ghana, sorting clearly predominates (83.4%); in Ecuador, recycling (62.4%); and in Viet Nam there is a

mix of sorting (38.6%), buying and selling (29%) and a high proportion of "don't know/prefer not to answer" (29.5%). This suggests distinct value chain, more commercial in Viet Nam, more oriented towards recycling in Ecuador, and more focused on sorting and processing in Ghana.

Table A3.2: Other waste activities in addition to collection (one choice per respondent), by country

	Viet Nam	Ecuador	Ghana	Total	X^2	p
n	200	197	221	618		
NA	59 (29.5%)	7 (0.04%)	0 (0%)	66 (10.7%)		
Sorting and processing	77 (38.6%)	64 (32.5%)	185 (83.4%)	326 (52.8%)		
Buying and selling	58 (29.0%)	0 (0%)	0 (0%)	58 (9.4%)		
Disposal	6 (0.03%)	3 (0.15%)	35 (15.9%)	44 (7.1%)		
Recycling	0 (0%)	123 (62.4%)	1 (0.01%)	124 (20.1%)	579.5	<0.001

4.2 Collecting plastic waste

Table A3.3 shows that plastics represent a much higher proportion of activity in Ghana (53.4% within the 51–75% range and 22.3% above 75%), while in Viet Nam and Ecuador most respondents fall within intermediate ranges (26–50%).

Table A3.3: Percentage of waste collected that are plastics, by country

	Viet Nam	Ecuador	Ghana	Total	X^2	p
NA	11 (5.5%)	5 (2.5%)	1 (0.5%)	17 (2.8%)		
Less than 10%	13 (6.5%)	11 (2.5%)	2 (1%)	26 (4.2%)		
10-25%	50 (25.0%)	48 (24.4%)	8 (3.6%)	106 (17.2%)		
26-50%	93 (46.5%)	82 (41.2%)	42 (19.0%)	217 (35.1%)		
51-75%	29 (14.5%)	38 (19.3%)	118 (53.4%)	185 (30.0%)		
More than 75%	4 (2.0%)	13 (6.6%)	50 (22.3%)	67 (10.8%)	191.7	<0.001

Table A3.4 indicates that the collection of PET plastics is almost universal in all three countries (94–96%), but Ecuador collects significantly more types of plastics on average (3.7 vs 3 in Viet Nam and 3.2 in Ghana), especially polypropylene and polystyrene. Viet Nam stands out in HDPE (84.5%).

Table A3.4: Different types of plastics collected (by "Yes" responses; more than one answer per respondent is possible), last month, by country

Qualitative	**Total**	**Viet Nam**	**Ecuador**	**Ghana**	**X^2**	**p**
PET	595 (96.3%)	197 (96.4%)	190 (96.4%)	208 (94.1%)	5.6	0.059
HDPE	473 (76.5%)	169 (84.5%)	144 (73.1%)	160 (72.4%)	10.5	<0.001
PP	320 (61.8%)	62 (31.0%)	132 (67.0%)	126 (57.0%)	55.3	<0.001
LDPE	452 (73.1%)	135 (67.5%)	155 (78.7%)	162 (73.3%)	6.3	0.042
PS	190 (30.7%)	44 (22.0%)	107 (51.3%)	45 (20.4%)	57.3	<0.001
Quantitative	mean (SD)	mean (SD)	mean (SD)	mean (SD)		p
No. of types of plastics	3.2 (1.2)	3 (1.0)	3.7 (1.2)	3.2 (1.4)		<0.001

Regarding access to equipment and storage, the picture is also diverse (Table A3.5). Ghana shows the more access to personal protective equipment (PPE): masks 83.3%, gloves 98.2%, boots 92.3%, vests 81.9% and helmets 53.4%. Viet Nam shows the lowest percentages in nearly all equipment, except bags and sacks, and hand tools. Ecuador occupies an intermediate position but with very high use of sun protection (47% vs almost none in the others). Storage facilities are common in Ecuador and Ghana (~60–68%), but rare in Viet Nam (8.5%).

Table A3.5: Access to equipment and storage facilities (by "Yes" responses; more than one answer per respondent is possible), by country

	Total	Viet Nam	Ecuador	Ghana	X^2	p
Mask	374 (60.59%)	98 (49.0%)	92 (46.7%)	184 (83.3%)	74.7	<0.001
Gloves	541 (87.5%)	159 (59.5%)	165 (83.8%)	217 (98.2%)	37.4	<0.001
Goggles	71 (11.5%)	9 (4.5%)	12 (6.1%)	50 (22.6%)	42.3	<0.001
Sun protection	104 (16.8%)	94 (47.0%)	6 (3.0%)	4 (1.8%)	192.4	<0.001
Boots	361 (58.4%)	47 (23.5%)	110 (55.8%)	204 (92.3%)	205.4	<0.001
High visibility vest	236 (38.4%)	9 (4.5%)	46 (23.4%)	181 (81.9%)	293.4	<0.001
Hand tools	201 (32.5%)	108 (54.0%)	57 (28.9%)	36 (16.3%)	69.7	<0.001
Clothes	108 (17.5%)	0 (0%)	98 (49.7%)	10 (4.5%)	782	<0.001
Helmet	151 (24.4%)	0 (0%)	33 (16.8%)	118 (53.4%)	708	<0.001
Private transport	22 (3.5%)	10 (5.9%)	12 (6.1%)	0 (0%)	618	<0.001
Pushcart	39 (6.3%)	18 (9.0%)	16 (8.1%)	5 (2.3%)	9.7	0.008
Bags, sacks, containers, packaging	323 (52.3%)	152 (76.0%)	42 (21.3%)	129 (58.4%)	124.1	<0.001
Other	23 (3.7%)	9 (4.5%)	14 (7.1%)	0 (0%)	15.2	0.001
Storage	286 (46.3%)	17 (8.5%)	135 (68.5%)	134 (60.6%)	172	<0.001

For Ecuador and Ghana, countries with high levels of access to storage, Table A3.6 shows that there are not significant differences between men and women's access to these facilities.

Table A3.6: Access to storage facilities (by "Yes" responses), by gender, for Ecuador and Ghana

	Ecuador	Ghana
Men	39 (63.9%)	83 (63.8%)
Women	96 (70.6%)	51 (56%)
X^2, p	0.58, p=0.45	1.06, p=0.30

4.3 Selling plastic waste and perceived changes

In Table A3.7, perceptions of change in the supply of plastic, working conditions, and public attitudes differ by country. Informal workers in Ecuador and specially in Ghana have perceived higher but still moderate improvements in the supply of plastics (3.2-3.7; over 40% in Ecuador and 70% in Ghana stated some amount increase) while Viet Nam responses move in the opposite direction, towards unchanged or slightly lower supply during the past year. Also, changes in working conditions are perceived more positively in Ghana and Viet Nam than in Ecuador, where they point towards a worsening picture. In terms of public attitudes towards informal workers, they are moderately positive in the three countries (3.5-3.8).

Table A3.7: In relation to plastic waste collection, perceived changes in the past year in 1) Amount of plastics collected; 2) Working conditions; and 3) Public attitudes towards waste workers. Likert-type scale analysed both quantitative and qualitatively.

1. Amount of plastic collected									
	*NA	1	2	3	4	5	X^2, p	mean (SD)	p
Viet Nam	6	38 (48.7%)	68 (50%)	53 (45.3%)	24 (13.7%)	11 (10.8%)		2.5(1.1)	
Ecuador	3	19 (24.4%)	38 (27.9%)	53 (45.3%)	57 (32.6%)	27 (26.5%)		3.2(1.2)	
Ghana	1	21 (26.9%)	30 (22.1%)	11 (9.4%)	94 (53.7%)	64 (62.7%)	139, <0.001	3.7(1.3)	<0,001
total	10	78	136	117	175	102		3.1(1.1)	
2. Working conditions									
	*NA	1	2	3	4	5	X^2, p	mean (SD)	p
Viet Nam	3	53 (60.2%)	46 (61.3%)	66 (31%)	30 (16.8%)	2 (3.7%)		2.9(1.9)	
Ecuador	7	28 (31.8%)	0 (0%)	64 (30%)	70 (39.3%)	28 (51.8%)		2.6(1.0)	
Ghana	0	7 (8%)	29 (38.7%)	83 (39%)	78 (43.8%)	24 (44.4%)	134, <0.001	3.1(1.3)	<0,001
total	10	88	75	213	178	54		2.85(1.5)	
3. Public attitudes									
	*NA	1	2	3	4	5	X^2, p	mean (SD)	p
Viet Nam	0	3 (50%)	8 (11.9%)	97 (51%)	74 (29.4%)	18 (22.8%)		3.5(0.8)	
Ecuador	22	3 (50%)	13 (19.4%)	58 (30.5%)	87 (34.5%)	14 (17.7%)		3.8(1.1)	
Ghana	2	0 (0%)	46 (68.7%)	35 (18.4%)	91 (36.1%)	47 (59.5%)	132.8, <0.001	3.7(1.1)	0,003
total	24	6	67	190	252	79		3.7(1)	

*NA: I don't know/ Prefer not to say; 1. Amount: "During the last year, has the amount of plastic waste you've been able to collect…" (5. Increased significantly; 4. Increased slightly; 3. Remained the same; 2. Decreased slightly; 1. Decreased significantly); 2. Conditions: "In the last year, how have the overall working conditions in your role changed?" (5. Much better; 4. A little better; 3. Remained the same; 2. A little worse; 1. Much worse); 3. Attitudes: "How have public attitudes towards waste collectors/ pickers changed in the last year?" (5. Much better; 4. A little better; 3. Remained the same; 2. A little worse; 1. Much worse).

Table A3.8 shows that confidence to negotiate prices and price evolution are perceived much more positively in Ghana (averages 3.5; 3.8; 76% reporting a price increase), and to a lesser extent in Ecuador, while negative perceptions predominate in Viet Nam (average 2.8 for plastic demand, 2.2 for negotiation, and 42% reporting a price decrease). This points to relative market deterioration in Viet Nam and improvement or at least higher market stability in both Ecuador and Ghana.

Table A3.8: In relation to plastic waste market, perceived changes in the past year in 1) Demand for plastics; 2) Confidence negotiating prices; 3) Selling plastic prices. Likert-type scale, analysed both quantitative and qualitatively.

1. Demand									
	***NA**	**1**	**2**	**3**	**4**	**5**	**X^2, p**	**mean (SD)**	**p**
Viet Nam	4	33 (50%)	31 (32%)	83 (51.2%)	41 (20.8%)	8 (9.9%)		2.8(1.1)	
Ecuador	6	8 (12.1%)	32 (33%)	65 (40.1%)	63 (32%)	23 (28.4%)		3.3(1.0)	
Ghana	5	25 (37.9%)	34 (35.1%)	14 (8.6%)	93 (47.2%)	50 (61.7%)	113, <0.001	3.5(1.3)	<0.001
total	15	66	97	162	197	81		3.2(1.2)	
2. Price									
	*NA	1	2	3	4	5	X^2, p	mean (SD)	p
Viet Nam	4	128 (42.2%)	63 (35.6%)	5 (4.1%)				1.4(0.5)	
Ecuador	8	74 (24.4%)	91 (51.4%)	24 (19.8%)				1.7(0.7)	
Ghana	5	101 (33.3%)	23 (13%)	92 (76%)			154, <0.001	2(0.9)	<0.001
total	17	303	177	121				1.7(0.8)	
3. Negotiation									
	*NA	1	2	3	4	5	X^2, p	mean (SD)	p
Viet Nam	5	92 (70.8%)	11 (14.3%)	54 (49.5%)	29 (19.7%)	9 (6.7%)		2.2(1.3)	
Ecuador	10	32 (24.6%)	34 (44.2%)	17 (15.6%)	59 (40.1%)	45 (33.3%)		3.3(1.1)	
Ghana	5	6 (4.6%)	32 (41.6%)	38 (34.9%)	59 (40.1%)	81 (60%)	192, <0.001	3.8(1.2)	<0.001
total	20	130	77	109	147	135		3.1(1.5)	

*NA: I don't know/ Prefer not to say; 1. Demand: "In the last year, has the demand for the plastic you collect…" (5. Increased significantly; 4. Increased slightly; 3. Remained the same; 2. Decreased slightly; 1. Decreased significantly); 2. Price: "In the last year, the price of the plastic waste you sell has…" (3. Increased; 2. Remained the same; 1. Decreased). 3. Negotiation: "How confident are you that you can negotiate a fair price with buyers?" (5. Very confident; 4. Somewhat confident; 3. Neutral; 2. Somewhat unconfident; 1. Not confident at all).

When looking at differences by gender when it comes to confidence negotiating prices, there are also differences by country (Table A3.9). In Viet Nam, a sector dominated by older women, men state a higher confidence level in comparison to women (average 2.67 vs 2.17), although these values are still in the neutral towards somewhat unconfident category. In Ghana, with higher confidence levels in general, the same gender difference appears, with men reporting higher values (3.98 vs 3.6). In Ecuador, no significant differences between the genders were found.

Table A3.9: Confidence negotiating price, by gender, by country. Likert-type scale, analysed both quantitative and qualitatively (M=Men; W=Women)

		*NA	1	2	3	4	5	X^2, p	mean (SD)	p
Viet Nam	M	0 (0%)	7 (25.9%)	2 (7.4%)	11 (40.7%)	7 (25.9%)	0 (0%)		2.67 (1.14)	
	W	5 (2.9%)	85 (49.1%)	9 (5.2%)	43 (24.9%)	22 (12.7%)	9 (5.2%)	10.1, p=0.07	2.17 (1.32)	0.05
Ecuador	M	5 (8.2%)	13 (21.3%)	7 (11.5%)	6 (9.8%)	18 (29.5%)	12 (19.7%)		3.16 (1.5)	
	W	5 (3.7%)	19 (14%)	27 (19.9%)	11 (8.1%)	41 (30.1%)	33 (24.3%)	5.4, p=0.39	3.32 (1.42)	0.50
Ghana	M	5 (3.8%)	3 (2.3%)	19 (14.6%)	14 (10.8%)	31 (23.8%)	58 (44.6%)		3.98 (1.19)	
	W	0 (0%)	3 (3.3%)	13 (14.3%)	24 (26.4%)	28 (30.8%)	23 (25.3%)	17.7, p=0.03	3.6 (1.11)	0.02

*NA: I don't know/ Prefer not to say; "How confident are you that you can negotiate a fair price with buyers?" (5. Very confident; 4. Somewhat confident; 3. Neutral; 2. Somewhat unconfident; 1. Not confident at all).

4.4 Membership and benefits of associations

As Table A3.10 shows, membership to any worker association is extremely high in Ghana (93.7%) and high in Ecuador (66.5%), but almost non-existent in Viet Nam (5%). No gender differences in membership were found in Ecuador (Table A3.11).[142]

Table A3.10: Workers associated to any informal worker association, by country

	Viet Nam	Ecuador	Ghana	Total	X^2	p
No	189 (94.5%)	66 (33.5%)	14 (6.3%)	269 (43.5%)		
Yes	10 (5%)	131 (66.5%)	207 (93.7%)	348 (56.3%)	348	<0.001

Table A3.11: Workers that are members of any informal worker association, by gender, for Ecuador

	n (%)	X^2	p
Men	37 (60.7%)	1.00	0.32
Women	94 (69.1%)		

Consistently, the perceived benefits are much greater in Ghana (average 3.3 benefits per person, with high percentages in health and safety, healthcare, and financial training) and Ecuador (average 1.3), whereas in Viet Nam they are practically zero (average 0.09; Table A3.12). Association membership seems to be a key driver of improving living and working conditions: n Ghana, via health and safety training, access to healthcare, and financial training; and in Ecuador, community belonging and support, followed by health and safety training, and provision of equipment.

[142] Due to lower sample size, Ghana and Vietnam were not tested.

Table A3.12: Perceived benefits from informal worker association membership, by country. Multiple choice question (more than one answer is possible per respondent).

Qualitative	**Total**	**Viet Nam**	**Ecuador**	**Ghana**	**X^2**	**p**
Any	323 (52.3%)	8 (4.0%)	129 (65.5%)	186 (84.2%)	668	<0.001
Financial support	100 (16.2%)	0 (0%)	8 (4.1%)	92 (41.6%)	605	<0.001
Financial training	153 (24.8%)	0 (0%)	14 (7.1%)	139 (62.9%)	751	<0.001
Healthcare	167 (27.0%)	3 (1.5%)	23 (11.7%)	141 (63.8%)	624	<0.001
Health and safety	201 (35.2%)	3 (1.5%)	39 (19.8%)	159 (71.9%)	626	<0.001
Community	135 (21.8%)	6 (3.0%)	65 (33.0%)	64 (29.0%)	437	<0.001
Equipment	130 (21.0)	2 (1.0)	37 (18.8%)	91 (41.2%)	475	<0.001
Better prices	61 (9.9%)	2 (1.0%)	22 (11.2%)	37 (16.7%)	440	<0.001
Other training	12 (1.9%)	0 (0%)	12 (6.1%)	0 (0%)	618	<0.001
Other	48 (7.8%)	0 (0%)	33 (16.8%)	15 (6.8%)	493	<0.001
Quantitative	mean (SD)	mean (SD)	mean (SD)	mean (SD)		p
No. of benefits	1.6 (1.9)	0.09 (0.6)	1.3 (1.4)	3.3 (1.9)		<0.001

4.5 Income

Plastic collection accounts for ~92–94.5% of total income in Ecuador and Ghana, but only ~76.8% in Viet Nam (Table A3.13). This confirms greater economic dependence in the first two countries, and more economic diversification in the latter.

Table A3.13: Income from waste activities, total income, and % of income from waste activities in relation to total; by country (in local currency)

		Income from waste	**Total income**	**% waste income over total**
Viet Nam (M VND)	mean	4.72	6.36	76.8
	n	197	194	178
	SD	21.3	21.5	32.9
Ecuador (USD)	mean	211.2	239.5	92.0
	n	197	197	197
	SD	129.1	162.4	19.1
Ghana (GHS)	mean	2420.3	2705.4	94.5
	n	221	221	221
	SD	2186.1	2633.6	14.1
				p <0.001

A logistic regression model was built to test whether there was any association between income and sociodemographic factors including gender, education level, and age group (see details in Methodology). The results show that gender significantly impacts the likelihood of earning a higher income (women are less likely to belong to the higher income group), even when controlling for education and age. In the case of Ecuador, the association between income and membership of a worker association and access to storage was also tested. According to the results, association members are more likely to be in the higher income

group. Access to storage seems to have a similar but weaker association with higher income, when factors such as gender, age, education remain constant. When looking at total income (including both waste activities and other sources), the results were similar and indicated that gender was the main factor affecting the likelihood of belonging to the higher income bracket, impacting women negatively.

4.6 Assistance and support received

In terms of assistance and support received (Table A3.14), Ghana and Ecuador reported higher for financial support (75% and 52%), health support (~70–76%) and protective equipment support (~62–70%), in comparison to Viet Nam (1–15%).

Table A3.14: Assistance and support received, by country ("Yes" responses; more than one answer per respondent is possible)

	Total	Viet Nam	Ecuador	Ghana	X^2	"p"
Financial training	270 (43.7%)	2 (1.0%)	102 (51.8%)	166 (75.1%)	248	<0.001
Healthcare	335 (54.2%)	31 (15.5%)	150 (76.1%)	154 (69.7%)	189	<0.001
Protective equipment	298 (48.2%)	23 (11.5%)	137 (69.5%)	138 (62.4%)	165	<0.001
Sorting equipment	142 (23.0%)	13 (6.5%)	66 (33.5%)	63 (28.5%)	48	<0.001

In addition, Ecuador and Ghana reported higher perceived importance of this type of assistance and support initiatives (Table A3.15).

Table A3.15: Perceived importance of the assistance and support received by the informal waste workers, by country. [*NA: I don't know/ Prefer not to say; 4. Very important; 3. Important; 2: Not very important; 1. It made no difference]

Financial training					
	*NA	4	3	2	1
Viet Nam	199 (57.3%)	1 (0.7%)	0 (0%)	0 (0%)	0 (0%)
Ecuador	93 (26.8%)	45 (32.6%)	50 (41.7%)	0 (0%)	9 (81.9%)
Ghana	55 (15.9%)	92 (66.7%)	70 (58.3%)	2 (100%)	2 (18.2%)
Healthcare					
	NA	4	3	2	1
Viet Nam	0 (0%)	178 (59.1%)	13 (10.7%)	8 (4.3%)	1 (10%)
Ecuador	0 (0%)	56 (18.6%)	52 (42.6%)	82 (44.3%)	7 (70%)
Ghana	0 (0%)	67 (22.3%)	57 (46.7%)	95 (51.4%)	2 (20%)
Protective equipment					
	*NA	5	4	3	2
Viet Nam	183 (56.1%)	5 (2.6%)	6 (6.5%)	5 (71.4%)	1 (33.3%)
Ecuador	60 (18.4%)	89 (46.8%)	44 (47.8%)	2 (28.6%)	2 (66.7%)
Ghana	83 (25.5%)	96 (50.5%)	42 (45.7%)	0 (0%)	0 (0%)
Sorting equipment					
	*NA	4	3	2	1
Viet Nam	192 (39.9%)	0 (0%)	4 (6.3%)	3 (100%)	1 (100%)
Ecuador	131 (27.2%)	41 (60.3%)	24 (37.5%)	0 (0%)	0 (0%)
Ghana	158 (32.8%)	27 (39.7%)	36 (56.3%)	0 (0%)	0 (0%)

Annex 3: Value for money assessment summary

1 Overview

This value for money (VFM) assessment reviews the Global Plastics Action Partnership's (GPAP) performance since 2019 across 25 country platforms (NPAPs), focusing on the 4Es (economy, efficiency, effectiveness, equity), sustainability and cost-effectiveness. It synthesises evidence from financial data, cost driver analysis, key informant interviews, case studies, impact modelling, and country-level cost-benefit analyses.

Table A4.1: Summary of VFM judgement by criteria

VFM criteria	Summary findings	Judgement
Economy	Sound procurement, costs per country have been mostly set up costs, 19% funds directed to in-country hosts.	Adequate
Efficiency	Mixed, but generally good set up of a standardised approach. Some operational and cost inefficiencies. Better indicators would have helped. Informal grants cost inefficient.	Above expectations
Effectiveness	Mixed, but hard to tell without rigorous dynamic indicators, and influence/ commitment indicators.	Adequate
Sustainability	Falls short of expectations due to the cliff edge of funding and lack of sustainability planning.	Below expectations
Cost-effectiveness	Based on CBAs of Ghana, Ecuador, Indonesia and Viet Nam, strong positive returns are found for data from 2021 to 2025. Due to GPAP, the results indicate 1.4 tonnes of plastics better managed/reduced, 22,315 jobs created/strengthened, an average benefit to cost ratio of 4, and a cost per tonne of plastic better managed/avoided of £18.	Above expectations
Equity	Some positive findings, but systemic gaps remain in translating inclusion commitments into binding, measurable, and equitable results.	Adequate
Overall value for money	Strong procurement and operational efficiency have delivered good value for money in establishing a standardised approach across multiple countries, and impacts and cost effectiveness so far appear strong. The true test of whether the high setup costs were worthwhile depends on the success of the sustainability phase, which remains uncertain.	Adequate/ above expectations

The GPAP initiative demonstrates **reasonably good overall VFM** (see Table A4.1 for a summary by criteria). Strong procurement, effective global–national coordination and growing operational efficiency have enabled GPAP to deliver a standardised and replicable approach across a wide range of countries. Its convening role and technical support have contributed to important progress in enabling environments, stakeholder collaboration, and early policy influence. Impacts appear to be strong with good returns on investment based on better management or avoidance of plastics. Nevertheless, the programme's effectiveness is uneven, monitoring systems are insufficient, and the sustainability challenge is profound. GPAP's central premise, that the upfront investment in establishing NPAPs will yield

long-term dividends, can only be achieved if NPAPs transition successfully into a sustain phase. At present, that transition remains uncertain. The sustainability of the model will determine whether the considerable upfront investment of time, resources, and political capital ultimately delivers a high return or becomes constrained by dependency and diminishing momentum. The key findings for each VFM evaluation question are summarised in Table A4.2.

Table A4.2: Key findings per VFM evaluation question

VFM evaluation question	Findings
A1. How has GPAP embedded VFM into programme design and delivery? (4Es, relevance, sustainability, VFM processes)	Good procurement and systems have embedded VFM in the design and delivery, but monitoring, evaluation and learning (MEL) falls short, as does a sustainability strategy. The design overall is relevant, but equity could have been better.
A2. What unintended benefits or disbenefits has the programme produced, and how do these impact VFM, including equity? (Effectiveness, equity, sustainability)	There was no evidence of significant unintended benefits or disbenefits. Systemic gaps remain in translating inclusion commitments into binding, measurable, and equitable results.
A3. Does the evidence to date support the predicted benefit–cost ratio (BCR) of 13.1:1 to 16.9:1? (Cost effectiveness)	Using actual data from four countries (Ghana, Indonesia, Ecuador, Viet Nam), the benefit to cost ratio is estimated at 4:1 for the period 2021-2025. When extrapolating to 2040, this ratio is 14:1, which supports the predicted range. However, this estimation is highly uncertain.
B1. What are GPAP's key cost drivers? (Economy)	The key cost drivers are consultancy, and GPAP staff costs. This reflects the start-up phase of the programme.
B2. How has GPAP ensured VFM in procurement, project selection and partner accountability? (Economy)	GPAP has used competitive processes and small grants had sound criteria for selection. NPAP accountability has happened informally with good contact with regional advisers but could have been formalised more in MEL systems.
C1. Has the programme been delivered efficiently, on time and on budget? (Efficiency)	Overall, it has been on time on budget, with generally good efficiency, with delays typically out of GPAP control. There were some areas for improvement, e.g. Informal economy grants, cross learning, MEL systems with sustainability (dynamic) indicators.
C2. What is the cost per outcome achieved, and how does this compare to similar programmes? (Cost effectiveness)	*Pending*
C3. Which output-to-outcome relationships in the Theory of Change are best evidenced? (Effectiveness)	GPAP's well-evidenced causal pathways demonstrate that its facilitation, research, and leveraging of expertise collectively drive national planning, market development, and inclusive growth in reducing plastic pollution.

2 Economy: minimising input costs

GPAP's total expenditure between 2019 and 2026 is approximately £34.4 million, of which Defra provides 56%. The cost structure is dominated by three major categories: the GPAP Global Secretariat at the World Economic Forum (WEF) (40%), consultancy contracts supporting technical and methodological work (30%), and NPAP subgrants flowing directly to host organisations (19%). A large share of expenditure (approximately 70%) is associated with WEF personnel and international consultants. Although only a smaller proportion reaches NPAPs as direct subgrants, consultancy spending supports many country-level activities, such as stakeholder engagement processes and the provision of standardised analytical tools.

Within consultancy spending, the development and deployment of the National Action Model (NAM) tool is one of the most significant cost items. Around 14% of the overall GPAP budget has funded this work, with a substantial share falling under the Defra budget. The NAM tool, alongside other strategic products, has formed the backbone of GPAP's offer to partner countries.

Procurement processes have been consistently competitive and robust. Host organisations for NPAPs were selected on the basis of open requests for proposals and were evaluated not only on cost but also on their convening capacity, neutrality and ability to work effectively across sectors. In several cases (including in Viet Nam, Pakistan, Panama and Nigeria) GPAP's management demonstrated adaptability by replacing hosts (due to a sub optimal fit or wider challenges) to protect quality and neutrality. Consultancy roles were similarly competitively procured. Safeguarding requirements, including SEAH (sexual exploitation, abuse and harassment) training, were systematically embedded across grant processes. For example, GPAP and Defra held an SEAH workshop with NPAP leads, provided tailored support during grant setup to ensure safeguarding measures are in place and understood, and provided mentoring and guidance on related administrative and reporting requirements. Overall, GPAP's procurement and cost management processes represent a sound and reasonable use of funds.

3 Efficiency: maximising outputs from inputs

Efficiency across GPAP varies between components, but overall performance is positive. GPAP's core model – supporting national multistakeholder platforms to co-design plastics action roadmaps – has been delivered in a timely and cost-effective manner in most countries. The NPAPs have been successful in convening diverse stakeholders, generating consensus, and creating momentum in national plastics systems. On average, NPAPs delivered results within approximately 25 months, with some variation due to political cycles, government decision-making timelines, data availability, and changes in host organisations. Notably, newer NPAPs have delivered outputs more rapidly and at lower cost, reflecting learning and improved operational efficiency within GPAP over time.

Efficiency in the informal sector grants programme was noticeably weaker. Management costs for these small grants were high relative to grant values, with oversight accounting for roughly 28% of expenditure. The grants were short in duration (typically six to seven months) limiting their ability to produce sustained results. Reporting was "light touch," with insufficient verification of financial data or delivery outcomes, partly due to the capacity constraints of many grantees. Furthermore, the short implementation periods, combined with delays caused by administrative processes or contextual factors in recipient countries, affected the timeliness and quality of outputs. Although some activities such as awareness campaigns and training programmes demonstrated reasonable cost ratios, the overall management model lacked the structure required for rigorous performance assurance.

The efficiency of the NAM tool's deployment was mixed. Although the tool was successfully rolled out across many countries, project teams reported delays driven by private sector resistance and stakeholder management challenges. The need for repeated engagement with

"champion" stakeholders was underestimated and not initially budgeted for. Some countries required more meetings than planned and experienced delays due to concerns around data quality, methodology transparency, or institutional buy-in. Additionally, the rigidity of certain assumptions within the NAM tool limited its adaptability to local contexts, although stakeholders differed on whether this rigidity was a drawback or a necessary element of standardisation. Nonetheless, GPAP consultants were widely praised for their technical capacity and their support to NPAP hosts, even though staffing gaps occasionally caused inefficiencies.

Efficient management of MEL proved to be a major weakness within GPAP. The MEL system relied heavily on indicators that did not reflect GPAP's role as a convenor and instead focused on outcomes difficult to attribute, such as improvements in livelihoods or large-scale reductions in mismanaged waste. Data quality varied significantly across NPAPs, with limited disaggregation of gender or inclusion variables and no indicators specifically designed to measure sustainability or VFM.

4 Effectiveness: achieving outcomes and impact

GPAP has contributed meaningfully to the creation of enabling environments for circular plastics economies across its portfolio. Its core strengths lie in establishing trusted, neutral, multistakeholder platforms; producing accessible and credible evidence; and enabling cross-sector collaboration around plastics system transformation. In many countries, the NPAP and roadmap process significantly raised awareness of the plastics challenge and mobilised government, private sector and civil society actors who had not previously worked together in this manner. Positive examples include Ecuador, Peru, Ghana and the Philippines, where NPAPs have catalysed policy action, strengthened collaboration, and fostered partnerships that may not otherwise have emerged. A notable feature of GPAP's model is its global-to-national connection: the use of insights from international plastics treaty negotiations to inform national planning, and vice versa.

However, effectiveness has been inconsistent across the portfolio. In some countries, government buy-in has been weaker, consultancy-led processes have overshadowed local ownership, or standardised models have not been sufficiently adapted to local conditions. Momentum created during roadmap development is fragile, and there is a real risk of stagnation, as several NPAPs lack clear delivery plans, financing strategies, or post-roadmap engagement mechanisms. Stakeholder fatigue, particularly among working groups and task forces, has already been observed. Moreover, there is a risk that stakeholders may focus on downstream waste management interventions rather than the upstream measures needed for systemic plastics reduction.

Equity and inclusion efforts were integrated unevenly. In some NPAPs, strong contextual analysis helped integrate gender equality and social inclusion into roadmap designs and governance structures. Practical support measures ensured more equitable participation in certain countries. However, many financing models and implementation plans lacked explicit provisions to safeguard benefits for informal sector workers and women-led enterprises, and monitoring systems rarely captured social outcomes in a systematic manner.

5 Sustainability

Sustainability is the weakest-performing VFM dimension. None of the NPAPs has transitioned into the "sustain" phase envisioned in GPAP's design, and all remain heavily dependent on external donor funding, particularly from Canada and the UK. The absence of a clear or viable long-term financing model poses a substantial risk to the continuation of NPAP activities. Government funding, while possible in some countries, could compromise the neutrality of the multistakeholder platform. Private sector funding could create similar risks or simply shift dependency from one external source to another.

Limited attention was given to sustainability during the original design of GPAP, leaving the programme with a structural vulnerability. As a result, GPAP now finds itself focusing on consolidation rather than expansion, prioritising the development of sustain strategies and exploring a two-year transition funding bridge. There is also an emerging view that future efforts may need to prioritise high-influence countries, including G20 members, to maximise impact with limited resources. Despite these recent corrective efforts, sustainability remains unproven and represents the greatest threat to GPAP's long-term VFM.

6 Cost-effectiveness

This section summarises the results from the Cost-Benefit Analysis (CBA) exercises for Ghana, Viet Nam, Ecuador and Indonesia. This involved comparing costs (including direct GPAP costs, associated fixed costs, and industry costs) to the benefits (in terms of plastic waste better managed) associated with GPAP, for the period 2021-2025. An internal rate of return was then estimated. Table A4.3 below summarises the results from the CBAs for each of the four countries.

Table A4.3 CBA results per country, using data from the period 2021-2025

	Ghana	Indonesia	Ecuador	Viet Nam	Total/Average
Present value total benefits (£)	34,448,359	5,775,734	840,441	11,500,378	52,564,912
Present value total costs (£)	3,280,229	3,516,722	2,491,440	3,293,292	12,581,683
Benefit to cost ratio	10.5	2	0.3	4.5	4
Cost per tonne of plastic avoided/ better managed (£)	5	13	47	6	18

Across the four countries, the programme delivered strong value for money over the 2021–2025 period, better managing or avoiding over 1 million tonnes of plastic and creating or strengthening more than 22,000 jobs at a total cost of just under £12.6 million. The overall benefit to cost ratio (BCR) of 4 means that for every pound spent, £4 of benefit was generated. This result was robust when tested in sensitivity analysis.

Ghana was the most cost-effective country among the four, contributing the largest amount of plastic avoided or better managed and delivering a BCR of 10.5, at a cost of £5 per tonne plastic avoided / better managed. Under central-case assumptions and a conservative attribution of 10%, the Ghana NPAP yields a net present value of over £31 million. Even under low-valuation and lower-attribution scenarios, the programme remains cost-beneficial.

Viet Nam also performed well, with a BCR of 4.5 and a similarly low cost of £6 per tonne of plastic avoided / better managed, while supporting the highest number of jobs. In this case, the benefits were largely driven by improvements in recycling.

In Indonesia, modelled improvements in plastic management across recycling, recovery, and disposal pathways achieved a more modest BCR of 2 at £13 per tonne of plastic avoided/ better managed. Conservative scenarios remain near or above break-even, indicating resilience to uncertainty.

Ecuador is the clear outlier. With a BCR of just 0.3, costs exceeded benefits over this period, and at £47 per tonne it was by far the most expensive country to operate in. A very low job creation figure adds to the picture of a programme that has struggled to achieve scale. This

negative return also reflects the low waste benefits achieved so far, and relatively high industrial fixed costs of a reuse scheme. However, the potential for economies of scale could result in a positive return going forward.

Table A4.4 summarises the results for the extrapolation of the results to 2040. These are highly uncertain and should not be used for decision making. As can be seen, nevertheless, they yield highly positive returns.

Table A4.4: Extrapolated CBA results up to 2040

	Ghana	Indonesia	Ecuador	Viet Nam	Total/Average
PV total costs (£)	7,606,080	8,694,176	5,844,432	6,862,768	29,007,456
PV total benefits (£)	262,016,956	52,431,681	6,392,460	87,472,791	408,313,889
BCR	34	6	1.09	13	14

These results suggest that once NPAPs become operational and local systems begin to function more effectively, GPAP-supported interventions can produce substantial long-term benefits relative to costs. However, the prerequisite for these benefits to materialise is the existence of a sustained institutional structure, an element that remains unproven. It must be noted that GPAP attribution to better managed waste and jobs created/strengthened is not possible to estimate accurately. And the modelling underlying the benefits is fraught with uncertainties.

Annex 5: Summary of modelling methodology

1 Overview of the modelling approach

This annex provides an overview of the structured methodology used for tracking countries' progress in avoiding plastic waste, reducing marine mismanaged plastic waste and supporting livelihoods. The approach combines the global modelling approach from Jambeck et al. (2015), national waste data, geospatial analysis (GIS), and specific modules from the UNEP/IUCN hotspotting toolkit. The methodology sets out: how interventions are categorised; the data required; how the baseline, business as usual (BAU) and system change scenarios (SCS) and their counterfactuals are used; and how attribution to GPAP/NPAP is determined. It establishes a replicable approach for future years and for cross-country comparisons.

This methodology is used to quantify progress under three indicators:

- KPI #5: Solid waste and pollution avoided (tonnes)
- Reductions in marine mismanaged plastic waste using the Jambeck et al. (2015) model
- KPI #7: People benefitting from strengthened or new livelihoods

2 Methodology for KPI #5: Solid waste and pollution avoided (tonnes)

2.1 Purpose

The KPI #5 methodology measures annual tonnes of waste or pollution reduced or removed due to GPAP/NPAP programming. Only municipal plastic waste is included, in line with the Terms of Reference for the evaluation. Two of the three reporting areas are included:

1. Avoided waste (reduction in waste at source).
2. Better managed waste (waste that no longer leaks into the environment).

2.2 Intervention categorisation

Interventions are classified using the standard NAM categories:

- Avoided waste: elimination, substitution, reuse/refill models, transition to paper or compostables.
- Collection systems: used solely to determine whether the waste's destination is considered "better managed".
- Better managed recycling: open-loop and closed-loop mechanical recycling, chemical conversion.
- Better managed disposal: sanitary/engineered landfills, co-processing incineration.

2.3 Data requirements

For each intervention, data has been collected on the sector (formal, private, informal, NGO), the intervention type and implementing entity, the year of implementation, funding source and GPAP/NPAP involvement as well as quantified waste amounts and the destination of the plastic waste.

2.4 Data sources

Three primary evidence streams were used:

- Countries' action roadmaps, including case studies and initiatives.
- Secondary sources, including company websites, World Bank reports, national and local government databases and reports, NAM tool outputs etc.
- Field interviews conducted by the University of Portsmouth (Nov–Dec 2025).

2.5 Use of the baseline and BAU counterfactual

The baseline year varies by country (2017 for Indonesia, 2022 for Ecuador; 2020 for Ghana; 2018 for Viet Nam) and the BAU counterfactual for KPI #5 includes:

- Interventions implemented before the baseline year with no incremental change after the baseline.
- Interventions not linked to GPAP/NPAP and implemented between the baseline and 2025.

These BAU interventions are excluded from KPI #5 but included in the Jambeck model.

3 Methodology for KPI #7: People benefiting from strengthened or new livelihoods (#)

3.1 Purpose and definition

KPI #7 measures the annual number of people whose livelihoods were strengthened or newly created due to GPAP/NPAP programming. Beneficiaries may be:

- Targeted/direct: clearly linked to funded interventions
- Indirect but attributable: receiving high or medium intensity support from NPAP partners

3.2 Disaggregation requirements

Data needs to be reported by:

- Type of livelihood support: created or strengthened
- Sector: primarily waste management (collection, disposal, incineration, wastewater)
- Gender equity and social inclusion (GESI) categories: sex, age, disability
- Geography (urban, rural)

The methodology requires the avoidance of double counting, especially where individuals benefit from multiple interventions.

3.3 Data requirements

For each intervention, the following data has been collected: project name and year; GPAP/NPAP involvement; activity description; type of livelihood benefit; total beneficiaries and GESI disaggregation.

3.4 Data sources

Primary sources include:

- Intervention list from KPI #5
- Field interviews conducted by the University of Portsmouth (Nov–Dec 2025)
- Secondary data: company websites, UNDP reports, news reports, business documentation etc.

4 Methodology for reductions in marine mismanaged plastic waste (Jambeck et al., 2015)

4.1 Purpose

This component estimates the countries' reductions in marine mismanaged plastic waste entering the ocean, benchmarked against the widely used Jambeck et al. (2015) global model. These reductions feed directly into Defra's marine plastic reduction target for 2025.

The model has been run for the:

- Baseline year (varying by country)
- Update 2025 (actuals)
- BAU scenarios (2025, 2030, 2040)
- System change scenario (SCS) (2025, 2030, 2040)

The difference between the baseline year and the Update 2025 identifies GPAP/NPAP attributable change.

4.2 Required input data

The Jambeck model requires four key parameters:

1. Coastal population – people living within 50 km of the country's coastline.
2. Plastic waste generation rate (kg/person/day).
3. % inadequately managed waste.
4. % littered waste (assumed to be 2% due to lack of country-specific data).

4.3 Coastal population calculation

A rigorous GIS methodology is used to:

- Create a 50 km buffer around the country's coastline.
- Overlay this buffer on the WorldPop gridded population datasets for the baseline year, 2025, and 2030.
- Apply zonal statistics to estimate the affected coastal population.

This produces coastal population estimates for the baseline year, 2025 and 2030. An increasing coastal population can drive a higher risk of marine plastic leakage.

4.4 Plastic waste generation rate

Two different approaches are used depending on the scenario:

- **Baseline, BAU, and SCS scenarios:** The data is derived from both the action roadmap data and the baseline and scenario modelling, combined with new census-based population projections.
- **Update 2025 scenario:** Sourced from national and provincial waste databases such as SIPSN (Indonesia) and INEC (Ecuador) or estimated through extrapolation of baseline data (Ghana).

4.5 Inadequately managed waste (% IMW)

For baseline, BAU and SCS scenarios: calculated using NAM-category distributions from the action roadmap and baseline and scenario modelling (incineration, open dumping, open burning, leakage).

For Update 2025 scenario:

- KPI #5 recycling and disposal results were combined to determine a % "better managed".
- % IMW estimate equals 100% minus % better managed.

4.6 Model outputs

With the inputs above, the model calculates the daily plastic waste generation, inadequately managed waste, littered waste; and the total marine mismanaged plastic (tonnes/year). These

outputs allowed the evaluation of reductions attributable to GPAP/NPAP and the comparison against BAU and SCS 2025 scenarios, and the Jambeck's projected 2025 estimate.

Annex 6: Bibliography

Alfaro-Núñez, A., Astorga, D., Cáceres-Farías, L., Bastidas, L., Soto Villegas, C., Macay, K. and Christensen, J.H. (2021). Microplastic pollution in seawater and marine organisms across the Tropical Eastern Pacific and Galápagos. *Scientific Reports*, 11(1), p.6424.

Anthesis (2025). *Philippines GESI context assessment report*.

Asase Foundation (2025). *GPAP Informal economy subgrant final narrative report*. Ghana.

AWP Network (2025). *GPAP informal economy subgrant final narrative report.*

Boachie, O. (2024). Development of rPET Standards in Ghana. MESTI/GSA/GRIPE. Available at https://www.switchtocircular.eu/sites/default/files/2024-02/Standardization%20for%20rPET%20Applications%20in%20Ghana_Oliver%20Boachie.pdf

CEIP and ASWOL (2025). *The Green Bridge stakeholders engagement workshop report.*

Chuzeke Nigeria Ltd (2025). *Recycling business in Nigeria*. [online] Available at https://chuzeke.com/recycling-business-in-nigeria-profitability-guide/

Congreso de la República del Peru (2017). *Ley no. 29419: Ley que regula la actividad de los recicladores.*

Cowan, E. and Tiller, R. (2021). What Shall We Do With a Sea of Plastics? A systematic literature review on how to pave the road toward a global comprehensive plastic governance agreement. *Frontiers in Marine Science*, 8.

Dalberg (2023). *Ciudad de México: análisis, modelado y hoja de ruta. Baseline analysis, Lever Impact Assessment*. PowerPoint presentation.

Dauvergne, P. (2018). Why is the global governance of plastic failing the oceans? *Global Environmental Change*, 51, pp.22–31.

Deeney, M., Hamelin, L., Vialle, C., Yan, X., Green, R., Yates, J. and Kadiyala, S. (2026). Global health burdens of plastics: a lifecycle assessment model from 2016 to 2040. *The Lancet Planetary Health*, [online] 10(1), p.101406

Defra (2021). *Grant Funding Agreement for GPAP grant.*

Defra (2022). *GPAP Change note 001: extension of original grant agreement*

Defra (2022). *GPAP Change note 002: grant extension and additional funding*.

Defra (2023). *GPAP Change note 003: Confirmation of funding*.

Defra (2024). *GPAP Change note 004: Allocation of underspent to FY23/24 from FY 22/23*

Defra (2024). *GPAP Change note 005: ODA terms update*

Defra (2025). *GPAP Change note 006: Variation to enact the final extension possible within the original grant agreement and therefore extend the grant by year (01/04/2025 to 31/03/2026) and award the final instalment of the grant*.

Defra (2025). *GPAP Change note 007: Variation to expenditure between financial years.*

Defra (2025). *GPAP Procurement cases 2021-2025*. Internal document (Excel).

DENR (2021). *National Plan of Action for the Prevention, Reduction and Management of Marine Litter.*

Earth Action (2024). *Plastic overshoot day*. Lausanne: Earth Action.

Eco-Green Africa (2025). *Informal waste sector capacity strengthening programme*. Programme report.

Ecolana (2025). *GPAP informal economy subgrant final narrative report.*

Ecoworks (2023). *Informal Economy Subgrant final report: Pacific Plastic Free Project (May–December 2023).* Bogotá, Colombia: Ecoworks and Yo Soy Magüipi Foundation. Unpublished report.

Entreamigos (2023). *Informal Economy: Capacity Strengthening Grant – Operational Report.* San Francisco, Nayarit, Mexico: Entreamigos Community Center. Unpublished report.

Ferraro, G. and Failler, P. (2020). Governing plastic pollution in the oceans: Institutional challenges and areas for action. *Environmental Science & Policy*, 112, pp.453–460

GCT, Galapagos Conservation Trust (2024). *Plastic Pollution Free Galapagos: 5 years of science to solutions.*

Geyer, R., Jambeck, J.R. and Law, K.L. (2017). Production, use, and fate of all plastics ever made. *Science Advances*, 3(7).

Ghana Climate Innovation Centre, GCIC. (2024). *Study on economic potential of plastic waste composite materials in Ghana*. GCIC / SNV. Available at: https://ghanacic.ashesi.edu.gh/wp-content/uploads/2024/12/Report_Economic-Potential-of-PWCM-in-Ghana.pdf

Government of Vietnam (2020). *National action plan for management of marine plastic litter by 2030 (Decision No. 1746/QĐ-TTg).* Hanoi: Ministry of Natural Resources and Environment.

Government of Vietnam (2025). *Decision No. 222/QĐ-TTg: National Action Plan for Circular Economy implementation by 2035* [English translation]. Available at: https://thuvienphapluat.vn/van-ban/EN/Thuong-mai/Decision-222-QD-TTg-2025-The-National-Action-Plan-for-circular-economy-implementation-by-2035/646507/tieng-anh.aspx

GPAP (2019). *NPAP modelling knowledge transfer session*. SYSTEMIQ – WEF – GA Circular – World Bank – WRI. PowerPoint presentation.

GPAP (2022). *Equity in Plastics Newsletter*, Dec 2022, issue 1.

GPAP (2022). *GPAP Program Update, Apr – Jun 2022*

GPAP (2022). *GPAP Program Update, Jan – Mar 2022*

GPAP (2022). *GPAP Program Update, Jul – Sep 2022*

GPAP (2022). *GPAP Program Update, Sep – Dec 2021*

GPAP (2023). *Equity in Plastics: The latest news, views and announcements*. December 2023, issue 2.

GPAP (2023). *Evaluation of the Global Plastic Action Partnership*. World Economic Forum.

GPAP (2023). *GPAP Annual report to UK-Defra, Apr 2021 – Mar 2022.*

GPAP (2023). *GPAP Indicator reporting, Apr 2022-Mar 2023*.

GPAP (2023). *GPAP Program Update, Apr – Jun 2023*

GPAP (2023). *GPAP Program Update, Jan – Mar 2023.*

GPAP (2023). *GPAP Program Update, Jul – Sep 2023*

GPAP (2023). *GPAP Program Update, Oct – Dec 2022*

GPAP (2023). *NPAP Playbook: a step-by-step guide to creating and sustaining an NPAP*.

GPAP (2024). *GPAP Annual report to UK-Defra, Apr 2023 – Mar 2024.*

GPAP (2024). *GPAP Community survey 2024: results*. Internal document (Excel).

GPAP (2024). *GPAP Program Update, Apr – Jun 2024*

GPAP (2024). *GPAP Program Update, Jul – Sep 2024*

GPAP (2024). *GPAP Program Update, Oct – Dec 2023*

GPAP (2024). *NPAP Knowledge Exchange Session: Enhancing the neutrality of NPAP Secretariats*. PowerPoint presentation.

GPAP (2024). *NPAP Newsletter,* issue no. 1 Oct-Nov 2024.

GPAP (2025). *GPAP Annual report to UK-Defra, Apr 2024 – Mar 2025.*

GPAP (2025). *GPAP Logframe, UDMarch2025*. Internal document (Excel).

GPAP (2025). *GPAP Program Update, Oct – Dec 2024*

GPAP (2025). *Highlights from GPAP visit to NPAP Indonesia and NPAP Viet Nam*, July 2025.

GPAP (2025). *NPAP Newsletter*, issue no. 2 Dec 2024 – Jan 2025.

GPAP (2025). *NPAP Newsletter*, issue no. 3 Feb-Mar 2025.

GPAP (2025). *NPAP Newsletter*, issue no. 4 Apr-May 2025.

GPAP (2025). *NPAP Newsletter*, issue no. 5 Jun-Jul 2025.

GPAP (2025). *NPAP Newsletter*, issue no. 6 Aug-Sep 2025.

GPAP (2025). *NPAP Newsletter,* issue no. 7 Oct-Nov 2025.

GPAP (2025). *Steering Board meeting*, Dec 2025.

GPAP (2025). *Sustain Phase Workshop: Defra and GPAP discussion*. PowerPoint presentation.

GPAP (n.d.). *GPAP - countries*. [online] Available at: https://www.globalplasticaction.org/countries

GPAP (n.d.). *NPAPs Presentation*. PowerPoint presentation.

GPAP/NPAP Ghana (2021). *A Roadmap for radical reduction of plastic pollution in Ghana.*

GPAP/NPAP Indonesia (2021). *Metrics Roadmap: reduce Indonesia's marine plastic leakage 70% by 2025.*

GPAP/NPAP Ecuador (2023). *NPAP Ecuador: análisis de impacto de intervenciones y escenarios de cambio*. Reporte.

GPAP/NPAP Ecuador (2023). *NPAP Ecuador: análisis de línea base 2022.* Reporte.

GPAP/NPAP Ecuador (2024). *Roadmap for Action on Plastics in Ecuador*.

GPAP/NPAP Maharashtra (2024). *Journey towards a circular plastic economy*: Maharashtra Plastic Action Roadmap.

GPAP/NPAP Nigeria (2024). *Towards a system change in plastic pollution: a Roadmap for the sustainable use of plastics in Nigeria*.

GPAP/NPAP Pakistan (2024). *National action roadmap to reduce plastic pollution.*

GPAP/NPAP Costa Rica (2025). *Hoja de ruta de acción sobre los plásticos en Costa Rica.*

GPAP/NPAP Dominican Republic (2025). *Hoja de ruta de acción sobre los plásticos en la República Dominicana.*

GPAP/NPAP Panama (2025). *Hoja de ruta de acción para los plásticos en Panamá.*

GPAP/NPAP Peru (2025). Hoja de Ruta de Acción para reducir la contaminación por plásticos en el Perú al 2040: resumen ejecutivo.

GPAP/PAP-CDMX (2024). *Hoja de ruta de acción para reducir la contaminación plástica en la Ciudad de México.*

GPAP/WEF (2019). *GPAP – Business as usual scenario, Indonesia. 3rd draft, for stakeholder consultation*. PowerPoint presentation.

GPAP/WEF (2019). *GPAP – Solutions Scenario Modelling, Indonesia. For expert panel consultation*. PowerPoint presentation.

GPAP/WEF (2019). *Scenario Modeling - Indonesia*. Internal document (Excel).

GPAP/WEF (2020). *Baseline Model – Ghana*. Internal document (Excel).

GPAP/WEF (2020). *Radically reducing plastic pollution in Indonesia: A multi-stakeholder action plan - National Plastic Action Partnership*. Jakarta: Global Plastic Action Partnership in collaboration with National Plastic Action Partnership.

GPAP/WEF (2020). *Radically reducing plastic pollution in Indonesia: a multistakeholder action plan*. NPAP, Insights report.

GPAP/WEF (2024). *GPAP Communications Campaign Oct 2024 – Sep 2025*. PowerPoint presentation.

GPAP/WEF (2024). *NAM tool – baseline results Ecuador*.

GPAP/WEF (2024). *NAM tool – BAU results Ecuador*.

GPAP/WEF (2024). *NAM tool – SCS results Ecuador*.

GPAP/WEF (2025). *Monthly updates – All Updates (2021-2025).* Internal document (Excel).

GPAP/WEF (2025). *NPAP Community: July 2025*. Internal document (Excel).

GPAP/WEF (2025). *NPAP Progress and Scorecard: July 2025*. Internal document (Excel).

GPAP/WEF (2026). *NPAP Ecuador Sustain Strategy*. Internal document.

GPAP/WEF (2026). *NPAP Ghana Sustain Strategy*. Internal document.

GPAP/WEF (2026). *NPAP Indonesia Sustain Strategy*. Internal document.

GPAP/WEF (2026). *NPAP Peru Sustain Strategy*. Internal document.

GPAP/WEF (n.d.). *Consolidated financial commitments from NPAP members*. Internal document (Excel).

GPAP/WEF (n.d.). Ecuador: baseline analysis, lever impact assessment. Internal document (Excel).

GPAP/WEF (n.d.). *NAM scenario modelling calculation sheet: Nigeria*. Internal document (Excel).

GPAP/WEF (n.d.). *NPAP Anticipatory Questions & Answers*. Internal document.

GPAP/WEF (n.d.). *NPAP Data Analysis: Viet Nam*. Internal document (Excel).

GRECI and MAATE (2024). Información técnica y estadística de la gestión integral de residuos y desechos sólidos no peligrosos municipales 2023. [Online) Available at https://app.powerbi.com/view?r=eyJrIjoiYmEzZDg0ZmEtMjBhNi00ZmU5LWE4MWUtMDdlYTkzYTU0NGU5IiwidCI6ImI5MmFkMDkzLTRhODYtNGZiNS1hY2VhLWNlMWU1ZmJiYWIxMyJ9

Greenhub (2025). *GPAP Informal Economy Subgrant Final Narrative Report*

Greenpeace East Asia (2019). *Data from the Global Plastics Waste Trade 2016–2018 and the Offshore Impact to China's Foreign Waste Import Ban*. Hong Kong: Greenpeace East Asia.

IBRD/World Bank (2018). *Solid and Industrial Hazardous Waste Management Assessment: Options and Action Area to Implement the National Strategy*. Washington DC: World Bank.

INEGI (2025). *The National Survey of Occupation and Employment (ENOE)*

International Finance Corporation (IFC) (2025). *IFC partners with Mohinani Group to drive plastic recycling and manufacturing in West Africa*, 12 February.

Jambeck, J.R., Geyer, R., Wilcox, C., Siegler, T., Perryman, M., Andrady, A., Narayan, R. and Law, K. (2015). Plastic waste inputs from land into the ocean. *Science*, 347, pp.768–771.

KindMind (2025). *NPAP Philippines Roadmap Public consultation*. Synthesis report.

KindMind (2025). *NPAP Philippines: Flexible Plastics Working Group*. Synthesis report.

KPMG (2024). *A Roadmap for the Sustainable use of Plastics in Nigeria*. PowerPoint presentation.

KPMG (2024). *Towards a system change in plastic pollution: A roadmap for the sustainable use of plastics in Nigeria*. PowerPoint presentation.

Lau, W.W.Y., Shiran, Y., Bailey, R.M., Cook, E., Stuchtey, M., Koskella, J., Velis, C., et al. (2020). Evaluating scenarios toward zero plastic pollution. *Science*, 369(6510), pp. 1455–1461.

Lazo, M., Adrián, E., López, W., Menéndez, A., Naranjo-Silva, S. and Rigail-Cedeño, A. (2024). Technology: Sustainable Engineering for a Diverse, Equitable, and Inclusive Future at the Service of Education, Research, and Industry for a Society 5.0. Hybrid Event.

Liboiron, M. and Cotter, R. (2023). Review of participation of Indigenous Peoples in plastics pollution governance. *Cambridge Prisms: Plastics*, 1.

Maes, T., Wienrich, N., Weiand, L. and Cowan, E. (2023). A little less conversation: How existing governance can strengthen the future global plastics treaty. *Cambridge Prisms Plastics*, 1.

March, A., Tsouza, A., Nieminen, L., Winton, S., Arora, H., Shejuti, S., Walker, T. and Fletcher, S. (2024). National action plans: Effectiveness and requirements for the global plastics treaty. *Cambridge Prisms Plastics*, 2.

Margherita Pucino (2025). *Ghana Plastic Action Roadmap: Analysis of the report in the light of the external evaluation, Nov 2025*. Internal document.

Miniplast (2025). *GPAP final report: Integrating Capacity Training for the Informal Economy*

Ministry of Environment and Forestry, Republic of Indonesia (2020). *National plastic waste reduction strategic actions for Indonesia*. Jakarta: Ministry of Environment and Forestry, Republic of Indonesia.

Muller, S (2024). *Nigeria launches a circular economy roadmap for a sustainable future.* [online] Available at https://www.switchtogreen.eu/nigeria-is-set-to-launch-a-circular-economy-roadmap-for-a-sustainable-future/

Ngnenbe, T. (2025). *Producer responsibility bill for plastics in the offing*. Available at: https://www.graphic.com.gh/news/general-news/ghana-news-producer-responsibility-bill-for-plastics-in-the-offing.html [graphic.com.gh]

Nguyen, M.-K., Lin, C., Nguyen, H.-L., Le, V.-R. et al (2023). Emergence of microplastics in the aquatic ecosystem and their potential effects on health risks: The insights into Vietnam. *Journal of Environmental Management*, 344.

NPAP Bangladesh (2025). *NPAP Quarterly narrative report, Jul – Sep 2025.*

NPAP Cambodia (2025). *NPAP Quarterly narrative report, Jul – Sep 2025*.

NPAP Cambodia (2025). *NPAP Quarterly updates, Apr – Jun 2025.*

NPAP Colombia (2025). *NPAP Quarterly narrative report, Jul – Sep 2025.*

NPAP Colombia (2025). *NPAP Quarterly updates, Apr – Jun 2025.*

NPAP Dominican Republic (2025). *NPAP Quarterly narrative report, Jul – Sep 2025.*

NPAP Dominican Republic (2025). *NPAP Quarterly updates, Apr – Jun 2025.*

NPAP Ecuador (2025). *NPAP Quarterly updates, Apr – Jun 2025.*

NPAP Ghana (2020). *Baseline results for Ghana (D2): 2nd Expert Panel Workshop.*

NPAP Ghana (2020). *Baseline results for Ghana (D3A): Steering committee meeting*.

NPAP Ghana (2021). *A Roadmap for radical reduction of plastic pollution: recommendations to the Steering Board.*

NPAP Ghana (2021). *Gender analysis of the plastics and plastic waste sector in Ghana*

NPAP Ghana (2021). *Ghana financing roadmap for plastics system transformation*. Global Plastic Action Partnership.

NPAP Ghana (2022). *An intersectional gender equality strategy for the Ghana NPAP 2022-2025.*

NPAP Ghana (2022). *Financing Roadmap.*

NPAP Ghana (2022). *Trade and the Circular Economy: A deep dive into plastics action in Ghana.*

NPAP Ghana (2024). *Intersectional and Inclusive Social Context Assessment of Ghana's Informal Plastics and Plastic Waste Sector.*

NPAP Ghana (2024). *Newsletter: Snapshot of 2024*, December 2024.

NPAP Ghana (2024). *NPAP Ghana intersectional gender equality strategy*. Global Plastic Action Partnership.

NPAP Ghana (2025). *NPAP Quarterly narrative report, Jul – Sep 2025.*

NPAP Guatemala (2025). *NPAP Quarterly narrative report, Jul – Sep 2025.*

NPAP Indonesia (2020). *Financing system change to radically reduce plastic pollution in Indonesia: A financing roadmap by the Indonesia NPAP.* Jakarta: NPAP Indonesia.

NPAP Indonesia (2020). *Financing system change to radically reduce plastic pollution in Indonesia: A financing roadmap developed by the Indonesia NPAP*: briefing paper.

NPAP Indonesia (2021). *NPAP Indonesia Behaviour change roadmap to radically reduce plastic pollution in Indonesia*. Jakarta: NPAP Indonesia.

NPAP Indonesia (2021). *NPAP Indonesia innovation roadmap to radically reduce plastic pollution in Indonesia*. Jakarta: NPAP Indonesia.

NPAP Indonesia (2021). *NPAP Indonesia Metrics Roadmap*. Jakarta: NPAP Indonesia.

NPAP Indonesia (2022). *Indonesian Plastic Sector Social Context Assessment Report*. Jakarta: NPAP Indonesia.

NPAP Indonesia (2022). *NPAP Indonesia: Policy Roadmap to Radically Reduce Plastic*. Jakarta: NPAP Indonesia.

NPAP Indonesia (2023). *Collaborative Action to Combat Plastic Pollution*. Monthly newsletter: April 2023 edition.

NPAP Indonesia (2023). *Collaborative Action to Combat Plastic Pollution*. Monthly newsletter: May 2023 edition.

NPAP Indonesia (2023). *Collaborative Action to Combat Plastic Pollution*. Monthly newsletter: October 2024 edition.

NPAP Indonesia (2023). *Collaborative Action to Combat Plastic Pollution.* Monthly newsletter: September 2023 edition.

NPAP Indonesia (2023). *Collaborative Action to Combat Plastic Pollution*. Newsletter Special Edition – International Women's Day.

NPAP Indonesia (2025). *July-September 2025: narrative monthly updates.*

NPAP Indonesia (2025). *NPAP Quarterly narrative report, Jul – Sep 2025.*

NPAP Lao PDR (2025). *NPAP Quarterly narrative report, Jul – Sep 2025*.

NPAP Maharashtra (2024). *Social context assessment of the plastic waste sector.*

NPAP Nigeria (2023). *Social context assessment by the Nigeria NPAP: National GESI analysis of the plastic value chain and impacts of plastic pollution.*

NPAP Nigeria (2025). *NPAP Quarterly narrative report, Jul – Sep 2025.*

NPAP Nigeria (2025). *NPAP Quarterly updates, Apr – Jun 2025.*

NPAP Nigeria (n.d.). *NAM: Baseline analysis worksheet.* Internal document.

NPAP Pakistan (2022). *Early insights on the plastics landscape in Pakistan*.

NPAP Pakistan (2022). *GESI assessment.*

NPAP Pakistan (2025). *NPAP Quarterly narrative report, Jul – Sep 2025.*

NPAP Pakistan (2025). *NPAP Quarterly updates, Apr – Jun 2025.*

NPAP Paraguay (2025). *NPAP Quarterly narrative report, Jul – Sep 2025*.

NPAP Paraguay (2025). *NPAP Quarterly updates, Apr – Jun 2025*.

NPAP Peru (2025). *Diagnóstico y propuestas para la gestión de los plásticos flexibles en el Perú con enfoque de economía circular.*

NPAP Peru (2025). *GESI analysis of the plastics value chain in Peru.*

NPAP Peru (2025). *NPAP Quarterly updates, Apr – Jun 2025.*

NPAP Philippines (2025). *Metrics Advisory Group ToR.*

NPAP Philippines (2025). News Updates 001, September 2025.

NPAP Philippines (2025). *ToR NPAP: Steering Board*.

NPAP Philippines (2025). *From Roadmap to Reality: Collective Action for a Circular Economy.* Public Consultation: National Action Roadmap Draft.

NPAP Philippines (n.d.). *NPAP Briefing note.*

NPAP Tanzania (2025). *NPAP Quarterly narrative report, Jul – Sep 2025.*

NPAP Tanzania (2025). *NPAP Quarterly updates, Apr – Jun 2025.*

NPAP Viet Nam (2022). *Newsletter*, December 2022.

NPAP Viet Nam (2022). *Viet Nam plastic action assessment and roadmap considerations*. Hanoi: Viet Nam National Plastic Action Partnership.

NPAP Viet Nam (2022). *Viet Nam Plastic Action Assessment and Roadmap Considerations: Appendices*.

NPAP Viet Nam (2023). *Gender context assessment of the plastic value chain in Viet Nam: Context assessment report*. Hanoi: Viet Nam National Plastic Action Partnership.

NPAP Viet Nam (2024). *Newsletter*, January 2024.

NPAP Viet Nam (2025). *Financing Roadmap for Plastic Action in Viet Nam to 2030*. Hanoi: Viet Nam National Plastic Action Partnership.

NPAP Viet Nam (2025). *NPAP Quarterly updates, Apr – Jun 2025.*

Ochoa-Herrera, V., Mónica Apraez, Flor, D., Flores, C., Valencia, M. and Velasco, A. (2025). Comprehensive Analysis of Plastic Regulations in Ecuador: Evaluating the Path to a Circular Economy. *Cleaner Production Letters*, p.100108.

OECD (2022). *Global Plastics Outlook: Economic Drivers, Environmental Impacts and Policy Options*. Paris: Organisation for Economic Co-operation and Development.

PAP-CDMX (2023, 2024, 2025). *Quarterly reports to GPAP*, Oct 2023 – Oct 2025.

PAP-CDMX (2024). *Guia de plásticos compostables.*

PAP-CDMX (2024). *Quarterly report to GPAP (Q1 2024).* Internal document.

PAP-CDMX (2024). *Quarterly report to GPAP (Q2 2024).* Internal document.

PAP-CDMX (2024). *Quarterly report to GPAP (Q3 2024).* Internal document.

PAP-CDMX (2024). *Quarterly report to GPAP (Q4 2024).* Internal document.

PAP-CDMX (2025). *NPAP Quarterly narrative report, Jul – Sep 2025*.

PAP-CDMX (2025). *NPAP Quarterly updates, Apr – Jun 2025.*

PAP-CDMX (2025). *Quarterly report to GPAP (Q1 2025).* Internal document.

PAP-CDMX (2025). *Quarterly report to GPAP (Q2 2025).* Internal document.

PAP-CDMX (2025). *Quarterly report to GPAP (Q3 2025).* Internal document.

PAP-CDMX (Unpublished). *Análisis de la prohibición de plásticos de un solo uso en la Ciudad de México*.

PAP-CDMX (Unpublished). *Hoja de ruta de financiamiento para la circularidad de plásticos en la Ciudad de México.*

Ralston, R. and Taggart, J. (2025). The Trojan Horse of Hybrid Governance: Corporate Power and Global Plastics Governance. *Global Policy*, 16, pp.705-712.

ReciVeci. (2024). National Plan for the Reduction of Plastic Waste in Ecuador (PNRRP).

Rodríguez-Meza, L.R., Romero-Perdomo, F. and González-Curbelo, M.Á. (2025). Analyzing Government Plans for the Plastic Value Chain in the Latin American Circular Economy. *Circular Economy and Sustainability*.

SiKanda (2023). *Inclusive Recycling in Oaxaca, Mexico*: *Final Project Report (March–December 2023)*. Oaxaca, Mexico: Solidaridad Internacional Kanda A.C. Unpublished report.

Sinba (2025). *GPAP Informal economy subgrant narrative report.*

Sundqvist, H. and Åkerman, M. (2024). Creating conditions for sustainability transformation through transformative governance: The case of plastic food packaging in Finland. *Journal of Cleaner Production*, 434, p.140296.

Sustainable Waste Indonesia (2025). *Collection and Recycling Rate Index of Plastic Waste in Indonesia*. Jakarta: Sustainable Waste Indonesia.

Switch-Asia (2025). *Plastic Policies in Indonesia: Country Profile*. Bangkok: Switch-Asia.

The World Bank (2021). *Plastic Waste Discharges from Rivers and Coastlines in Indonesia.* Washington DC: The World Bank.

Toledo, E., Camacho, J.A., Rodríguez, M., & Alvarado, R. (2024). Individual, household and institutional level predictors of waste sorting: Evidence for Ecuador. *Waste Management & Research the Journal for a Sustainable Circular Economy*, 43(6), pp.946–956.

UNDP (2024). *Human Development Report 2023/2024.*

UNEP (2023). *Turning off the Tap: How the world can end plastic pollution and create a circular economy*. Nairobi: United Nations Environment Programme.

van Leeuwen, J. and Surya, I.R.F. (2024). Network power and exclusion of informal waste pickers when plastics flows change. *Marine Policy*, 167, p.106285.

VietCycle (2025). *Empowering Green Warriors project*.

WEF (n.d.). *Financing coordination group*: leaflet.

WEF/NPAP Philippines (2025). *Understanding impacts of plastics pollution and biodiversity and associated services of ecosystems from the lens of the stakeholders (Plasti-BASE).* PowerPoint presentation.

World Bank (2022). *Policy brief: Reduction of single-use plastics in Vietnam*. East Asia and Pacific Marine Plastics Series. Washington DC: World Bank.

World Bank (2022). *Toward a national single-use plastics roadmap in Vietnam*: *Strategic options for reducing priority single-use plastics*. East Asia and Pacific Marine Plastics Series. Washington DC: World Bank.

World Bank (2025). *World Development Indicators*. Washington, DC: World Bank. Available at: https://databank.worldbank.org/source/world-development-indicators

World Bank (2025). Worldwide Governance Indicators, 2025 Revision. Washington, DC: World Bank Group. Available at https://www.worldbank.org/en/publication/worldwide-governance-indicators

World Economic Forum (2026). *Centre for Nature and Climate*: *Circularity – Tech – Plastics (Annual Meeting Davos 2026).* Geneva: WEF.

Yasif Nigeria (2025). *Empowering Communities for Plastic Sustainability (ECPS) Training Report for 1321 Women, Youth and PWDs on Plastic Upcycling, Project Management, Finance, and Business Planning in Niger, Cross River and Kano State*.

Zumbansen, P. (2012). Governance: An interdisciplinary perspective. In: D. Levi-Faur, ed., *The Oxford Handbook of Governance*. Oxford University Press.

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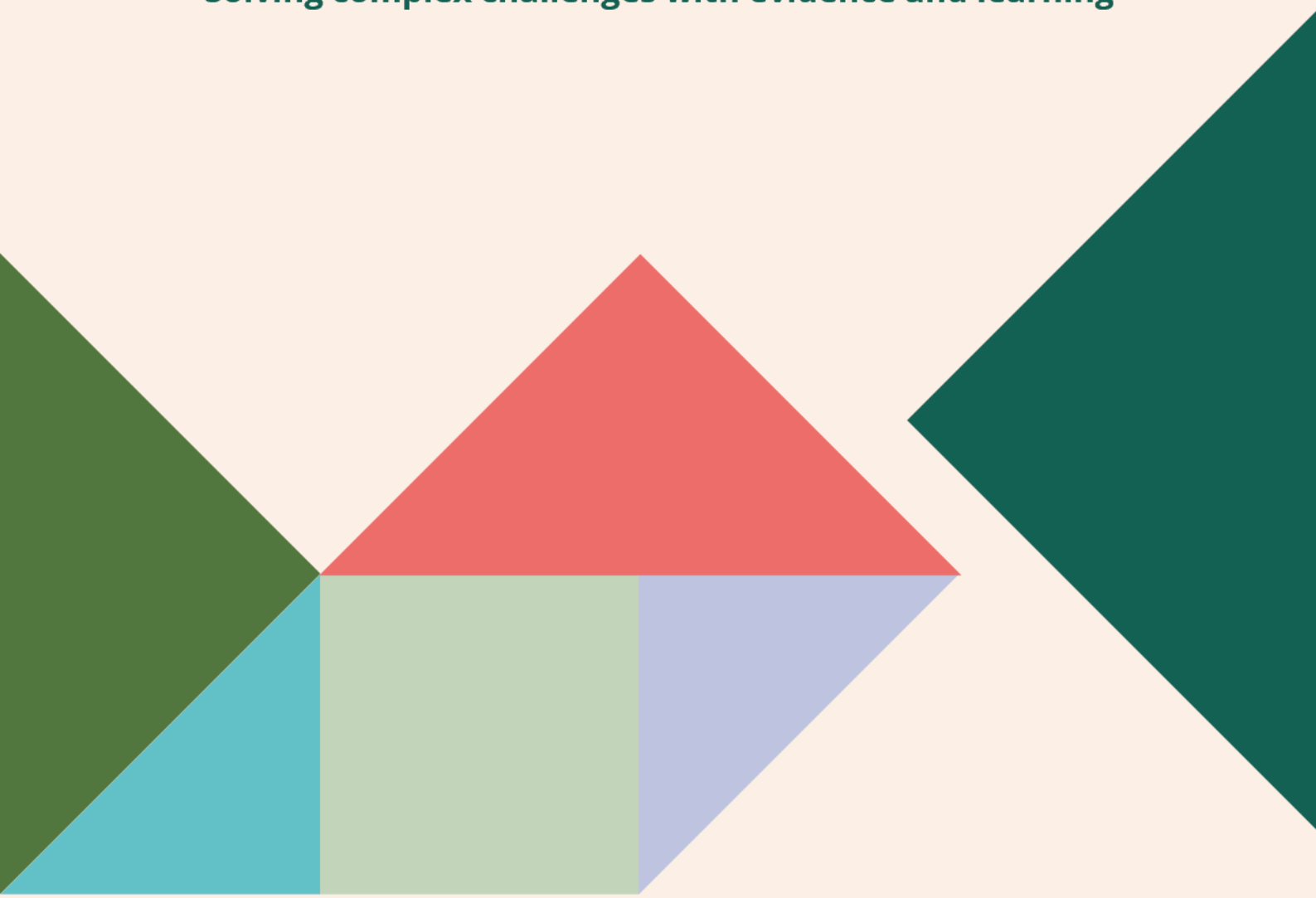

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