



A REVIEW OF MARINE PLASTIC LITTER IN THE WESTERN INDIAN OCEAN REGION: *Effectiveness of measures undertaken and opportunities*



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Technician for Maputo municipalities conducting awareness to children during clean up activity, Maputo, Mozambique
(© Lúrio University)

1. Introduction

1.1. Context of the study

The Western Indian Ocean (WIO) region comprises 10 countries: Somalia, Kenya, Tanzania, Mozambique, South Africa, Comoros, Madagascar, Seychelles, Mauritius and France/Reunion. WIOMSA, the Western Indian Ocean Marine Science Association, was established in 1993 with the goal of promoting marine sciences in the WIO region in order to conserve and allow for sustainable use of its marine resources.

Since 2008, WIOMSA has collaborated with numerous organizations on studies and programmes concerning marine litter at a national and regional level. However, coordination and collaboration between the various stakeholders across the region has remained limited. In recognition of the need for a coordinated approach to the issue, a Group of Experts on Marine Litter and Microplastics was established. A key priority of this group is to assess the status of marine litter and microplastics at a regional level, including the environmental, health and economic impacts, and identify current actions and opportunities.

In order to further its understanding of the issue of marine litter across the region, WIOMSA commissioned three interrelated studies to assess:

- (i) the status of marine litter and microplastics knowledge in the WIO region.
- (ii) their ecological, human health and economic impacts.
- (iii) the effectiveness of measures undertaken to address the challenge and, opportunities that could be harnessed for enhanced interventions.

1.2. Purpose and scope of the present study

1.2.1. Focus of the study

This study corresponds to the third of these three interrelated studies. Its objective is to *“review policy and institutional frameworks on marine litter in the WIO region”*, including government and non-government (private sector, NGO, and community) actions and to analyse opportunities and needs.

More specifically, the present study’s focus is *to assess*, in relation to the marine plastic litter issue, the effectiveness and the diversity of the regional governance landscape, the national policy and institutional frameworks, and *the effectiveness of the measures conducted by all types of stakeholders*. Hence, it identifies initiatives at local, national or regional levels, involving cooperation and partnerships, as well as potential synergies between stakeholders regarding marine plastic litter.

This identification of initiatives enables the highlighting of both strong action areas as well as gaps in policies and actions. Based on these conclusions, recommendations are developed to address these gaps.

1.2.2. Scope of the study

The present study considers *marine plastic litter*, which is found throughout the Western Indian Ocean countries in different forms (macro- and microplastics).

Geographically, the study concentrates on the ten countries of the Western Indian Region which are *Somalia, Kenya, Tanzania, Mozambique, South Africa, Comoros, Madagascar, Seychelles, Mauritius and France/Reunion* (Figure 1). For purposes of simplification, *France/Reunion*, which is a French region, is referred to as a “country” in the rest of the report.



Figure 1. The 10 countries of the Western Indian Ocean region.

Beyond the institutional framework that each country has developed on marine plastic litter (local policies, national strategies, and international frameworks), this study identifies the main initiatives stakeholders have implemented at various scales. These initiatives to address the challenge of marine plastic litter take **different forms of plastic management**:

- The **avoidance** of plastics through promotion of alternatives.
- The promotion of **eco-design** (improvement of product design for recycling and avoiding the use of plastic in favour of more environmentally friendly materials).
- The **reuse** or **upcycling** of plastic materials.
- The implementation and/or improvement of **collection** systems or **recycling**.
- The **treatment** of plastic waste to generate energy or fuel.

Actions were not included if they involved exclusively education and awareness raising, removal of plastic waste from the environment for disposal (clean-ups) which is considered as remediation rather than waste management, or research (considered in study i).

1.3. Methodology

1.3.1. Literature review

The objective of literature review is to understand the existing regulatory framework and identify the initiatives which are currently in place to address the challenge of marine plastic litter. The information gathered for each country and the WIO region includes:

- **Current regulatory frameworks** and regional instruments addressing marine plastic pollution including:
 - International agreements, treaties, and conventions.
 - National laws and regulations relating to marine plastic pollution such as targeting common single-use items (plastic bags, microbeads, etc.) and encouraging circular economy (extended producer responsibility, etc.).
 - Strategies and action plans.
- **Initiatives implemented by governmental, non-governmental, communities and private actors** which, directly or indirectly, control, reduce or combat marine plastic litter.

The literature review was undertaken using keyword searches, in ECOGEOS' existing literature on the subject, as well as online search engines. The search was undertaken in English, French and Portuguese to ensure that relevant literature was identified from across the entire WIO region. The literature identified and used for the study took a variety of forms and included reports, journal publications, legislation and other legal documentation, conference presentations, websites and on-line news platforms.

A number of reports, such as the *Strategy for Marine Waste: Guide to Action for Africa* (Ribbink *et al.*, 2017) and the *Fight against Marine Plastic Pollution* report (ADEME, 2020), provided useful summaries of the international agreements relating to marine plastic pollution as well some existing initiatives. Additionally, many of the initiatives were identified via online searches. However, likely due to the small scale and limited resources of the implementing actor, the information available was often limited, particularly in relation to the specific type of waste targeted and existing partnerships. The classification of the elements of the regulatory framework was based on that used in the UNEP's *Marine Litter Legislation: A Toolkit for Policymakers* report (2016).

A bibliography of the documentation used in the study is provided in Appendix 1.

1.3.2. Interviews with relevant stakeholders

To further expand on the information gathered through the literature review, semi-structured interviews with relevant stakeholders were undertaken.

1.3.2.1. INTERVIEWS WITH NATIONAL REPRESENTATIVES

Representatives from each of the 10 countries were selected based on the information gathered through the literature review, as well as advice from WIOMSA. The list of representatives from each country that were interviewed is provided in Appendix 2.

To guide the discussion, and ensure that all relevant subjects were covered, the interviews were structured around a framework. This framework is presented in Appendix 3.

1.3.2.2. INTERVIEWS WITH REGIONAL EXPERTS AND PRIVATE SECTOR/NPOS

In addition to the interviews with representatives from each country, interviews were also conducted with experts from regional organisations as well as members of the private sector and a non-profit organisation (NPO). The list of additional representatives is shown in Appendix 2.

1.3.3. Classification of initiatives in a database

The information gathered through the literature review and interviews has been assembled into a database. To facilitate like-to-like comparisons, separate classification systems were used for documentation relating to the regulatory framework and information on current initiatives.

For each document pertaining to the regulatory framework, the database is used to record the type of waste targeted, the scope, the country or countries involved, the date and details of implementation. The data collected on the various initiatives includes information on the waste targeted by the action (type, size, source), the implementing group, date, location and existing partnerships.

The database is provided in conjunction with this report, in Appendix 4.

1.3.4. Data analysis

The information gathered on the regulatory framework and actions were analysed separately. The regulatory framework is investigated on both an international/regional level (to assess the participation of each country in the WIO region in the available conventions, programmes and action plans) and at a national level (to assess the current status of the national regulatory framework in each country as well as the various devices employed). The results of the analysis of the regulatory framework are presented in Section 3.

The initiatives identified are subject to both a quantitative and qualitative analysis. The quantitative analysis includes identifying the geographical distribution of the initiatives across the region, the characteristics of the initiatives (scale, implementing actor, timeframe), type of waste and environment targeted and existing partnerships. The qualitative analysis considers the effectiveness of the actions as a whole, based on available literature as well as information gathered through the interviews. This transversal analysis of the actions is presented in Section 4.

Finally, to assess the current overall situation in the WIO region, considering both the regulatory framework and the existing initiatives, a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis is undertaken. This identifies the strong areas, the gaps or weaknesses that exist, potential opportunities that may be harnessed for improvement and external threats that should be taken into account. The results of the SWOT analysis are used to develop a series of recommendations outlining ways to enhance and expand upon the efforts to combat marine plastic litter. The SWOT analysis and recommendations are presented in Sections 5 and 6 respectively.



Group of citizens from (Lurio University, Provincial Department of Fisheries, Community Council of Fisheries) after one clean up activity at Wimbe Beach in Pemba, Cabo Delgado, Mozambique (© Lúrio University)

2. Institutional and regulatory framework

2.1. International regulatory framework

2.1.1. International and regional conventions and agreements

A summary of the international or regional conventions and agreements which relate to marine plastic litter and cover all or part of the WIO region is provided in Table 1.

Table 1. Summary of international conventions and agreements in the WIO region.

Name of Agreement	Year of Adoption	Waste targeted	Description
London Convention and Protocol on the Prevention of Marine Pollution	1975 (Convention) 1996 (Protocol)	All wastes dumped at sea	Agreement to control deliberate dumping at sea from vessels, aircraft, platforms etc. and prohibit dumping of certain hazardous materials. Contracting parties agreed to implement the Convention through regulation and permitting. The London Protocol is an update of the Convention which prevents all dumping of wastes (permits granted for specific exceptions).
Abidjan Convention for Cooperation in the Protection, Management and Development of the Marine and Coastal Environment of the Atlantic Coast of the West, Central and Southern Africa Region	1984	Pollution from ships, dumping, land-based sources and sea-bed explorations	Provides a legal framework for marine related programmes across west, central and southern Africa.
Nairobi Convention	1996	All wastes impacting the coastal and marine environment	Partnership between governments, the private sector and civil society to ensure a healthy and prosperous marine and coastal environment in the WIO region.
Jeddah Convention for the conservation of the Red Sea and Gulf of Aden	2005	Land-based solid wastes	Protocol concerning the Protection of the Marine Environment from Land-Based Activities including improved waste management and cooperation and exchange of information.
MARPOL (International Convention for the Prevention of Pollution from Ships)	2018	Macroplastics including fishing gear and contents of lost containers	Addition of Annex V to the 1973 Convention addresses garbage from ships, including complete ban on disposal of all plastics at sea.
Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal - Plastic Waste Amendments	2020	Hazardous wastes, including plastics	Amendments to the 1992 Basel Convention to enhance control of transboundary movements of plastic waste and clarify the definition of hazardous and non-hazardous types of plastic wastes.

These international or regional conventions and agreements largely relate to the management of waste, including plastic, from marine-based sources (ships, dumping), with land-based sources only addressed by the Nairobi, Jeddah and Basel Conventions.

The participation of each of the WIO countries in each of the international agreements identified is shown in Table 2, with cream squares indicating the participation of a country in the relevant agreement. As some of the agreements identified apply only to particular regions, blue squares have been used to indicate the countries for which participation in the agreement is not available. The remaining white squares therefore represent the agreements in which countries have chosen not to participate.

Table 2. Participation of WIO countries in international and regional conventions and agreements.

Name of Agreement	Comoros	France/ Reunion	Kenya	Madagascar	Mauritius	Mozambique	Seychelles	Somalia	South Africa	Tanzania
London Convention										
London Protocol										
Abidjan Convention										
Nairobi Convention										
Jeddah Convention										
MARPOL										
Basel Convention										

As can be seen in Table 2, participation by WIO countries in international agreements is generally widespread, with 4 countries (France/Reunion, Kenya, Madagascar and South Africa) involved in all relevant conventions and agreements. Some gaps exist, such as the five countries which are not signatories to the London agreements and the Seychelles which, as Somalia joined in 2020, remains the only country in the WIO region that is not a signatory to MARPOL. However, all countries are still involved at an international and regional level to some extent.

2.1.2. International and regional programmes and action plans

In addition to the conventions and agreements identified above, at an international and regional level there are also numerous programmes and action plans which relate to marine plastic litter. These are summarised in Table 3. It should be noted that this is a non-exhaustive list, but provides the key elements identified through the literature review.

Table 3. Summary of international and regional programmes and action plans.

Name of Agreement/Plan/Programme	Year of Adoption	Type of Waste(s) targeted	Description
GEF Small Grants Programme: International Waters	1992	Land-based pollution	Grants available to local communities, community-based organisations and other NGOs for activities including land-based pollution prevention and reduction.
Nairobi Convention Strategic Action Programme	2009	Solid wastes from major urban centres and discharge from rivers	Recognises marine litter/solid waste as a key pollution category.
Declaration of the Global Plastics Associations for Solutions on Marine Litter	2011	Marine litter including macro- and microplastics	Agreement of national industry bodies from around the world to address marine plastic litter through public-private partnerships, research, supporting policy, education, improved recycling and recovery and stewardship.
Global Partnership on Marine Litter	2012	Marine litter and microplastics	Multi-stakeholder partnership established following the Manila Declaration to facilitate sharing knowledge and experience and work towards SDG14.1 on marine pollution.
Samoa Pathway	2014	Marine pollution including plastics	Addresses marine pollution through partnerships and cooperation, provision of appropriate infrastructure and implementation of reduction, reuse, recycling, recovery and return approaches.

Name of Agreement/Plan/ Programme	Year of Adoption	Type of Waste(s) targeted	Description
UNEA Resolutions on Marine Litter	2014	Marine litter including macro- and microplastics	Successive resolutions on tackling plastic and microplastic marine pollution through improved understanding and governance along with a long-term goal to eliminate the discharge of litter and microplastics into the oceans.
G7 Action Plan to Combat Marine Litter	2015	Marine litter including macro- and microplastics, from land and sea-based sources	List of Priority Actions for addressing land-based and sea-based sources; removal actions, and education, awareness and outreach.
G20 Action Plan on Marine Litter	2017	Marine litter including macro- and microplastics, from land and sea-based sources	Commitment to preventing and substantially reducing marine litter and its impacts by 2025 and support of the Sustainable Development Goals.
IUCN MARPLASTICCs Programme	2017	Marine plastic litter	Programme to combat marine plastics focusing on five countries including Kenya, Mozambique and South Africa.
International Maritime Organisation Action Plan on Marine Litter	2018	Marine plastic litter from ships at sea and in ports	Created to enhance existing policy and regulatory frameworks and introduce new supporting measures including enforcement, improving port facilities and awareness raising.
WIO Regional Action Plan on Marine Litter	2018	Marine litter from land- and sea-based sources	Action Plan for the WIO region with objectives for reduction (including upstream), monitoring, management and removal.
Action Plan for the Reduction and Management of Waste in the Countries of the Indian Ocean Commission (IOC)	2019	All types of waste	5-year Action Plan following on from a 2014 regional diagnostic study. Three Priority Axes: creation of a waste monitoring agency, improving the regulatory and institutional framework and developing research, education and innovation on reduction and recovery of plastic waste in the ocean.
Implementing Sustainable Low and Non-Chemical Development in Small Island Developing States (ISLANDS)	2019	Chemicals and plastics	Regional project to develop and enforce coherent standards for chemicals and single use plastics. Components include improved management of Single-use Plastics (SUPs), plastics recycling and development and implementation of a regional action plan to combat the generation of marine litter.
Commonwealth Clean Ocean Alliance	2019	Single-use plastics, plastic bags and microbeads	Technical assistance to assist in meeting commitments on avoiding SUPs, reducing plastic bags and banning microbeads in cosmetics and personal care products.
NORAD Small Grant Programme on Plastic Waste	2020	Plastic waste	Funding for municipal, national or regional projects to improve plastic waste management and reduce marine pollution.
IOC ExpLOI Programme	2021	Marine plastic litter	Programme to combat marine plastic litter through reduction and recycling through improving awareness, education and development of a regional circular economy.

The participation of the WIO countries in the programmes and action plans listed above is shown in Table 4 below. As for the conventions and agreements, cream squares indicate a country's participations, blue indicates non-applicable with the remaining white squares showing areas of non-participation.

Table 4. Participation of WIO countries in international and regional programmes and action plans.

Name of Agreement	Comoros	France/ Reunion	Kenya	Madagascar	Mauritius	Mozambique	Seychelles	Somalia	South Africa	Tanzania
GEF Small Grants Programme	Participation	No participation	Participation	Participation	Participation	Participation	Participation	No participation	Participation	Participation
Nairobi Convention SAP	Participation									
GPA Declaration on Marine Litter	No participation	Participation	No participation	No participation	No participation	No participation	No participation	No participation	Participation	No participation
Global Partnership on Marine Litter	No participation	No participation	Participation	No participation	Participation	No participation	Participation	Participation	Participation	Participation
Samoa Pathway	Participation	Participation unavailable	Participation unavailable	Participation unavailable	Participation	Participation unavailable	Participation	Participation unavailable	Participation unavailable	Participation unavailable
UNEA Resolutions on Marine Litter	Participation									
G7 Action Plan	Participation unavailable	Participation	Participation unavailable							
G20 Action Plan	Participation unavailable	Participation	Participation unavailable	Participation	Participation unavailable					
IMO Action Plan on Marine Litter	Participation									
WIO RAP on Marine Litter	Participation									
IOC Action Plan	Participation	Participation	Participation unavailable	Participation	Participation	Participation unavailable	Participation	Participation	Participation unavailable	Participation unavailable
ISLANDS	Participation	Participation	Participation unavailable	Participation	Participation	Participation unavailable	Participation	Participation	Participation unavailable	Participation unavailable
Commonwealth Clean Ocean Alliance	Participation unavailable	Participation unavailable	Participation							
NORAD Small Grant Programme	Participation									

 Participation

 No participation

 Participation unavailable

* Three French plastic associations (not located in France/Reunion) are signatories of the GPA Declaration.

Similarly to the trends seen for conventions and agreements, [participation in the various programmes and action plans is high throughout the WIO region](#). Since 2014, all WIO countries are participating in all programmes and action plans that are available to them. There is some variation in the number of programmes available to each country, for example France/Reunion, classified as a Small Island Developing States (SIDS) and a member of the IOC, G7 and G20, is more involved at an international level than Somalia who is not eligible to be part of these bodies. While this does not imply a lack of international-level participation (again taking the example of Somalia, it is still part of three Actions Plans and three programmes or partnerships), it does place slightly greater importance on action being undertaken at a national level.

2.2. National and local regulatory framework

2.2.1. Overview of the WIO region

At a national and local level, a range of mechanisms were identified relating to the prevention and management of marine plastic litter. These can be classified into the following categories:

- **Legislation**, regulations and directives.
- **Strategic plans and policy** including action plans.
- **Financial incentives** such as levies and taxes.
- **Industry-action plan**.

While it is acknowledged that industry action plans are non-binding, industry does have the power to affect significant change through their implementation and therefore these mechanisms are considered a relevant part of the regulatory framework.

The mechanisms listed above have been employed to address marine plastic litter in different ways. These devices include discouraging the manufacture, import or use of plastic products, encouraging or implementing Extended Producer Responsibility schemes, and managing land- and marine-based sources of marine plastic litter.

In recognition of the different stages of development and implementation of the various mechanisms, they have been classified as either:

- Finalised and enforced.
- Finalised but not enforced – this applies to mechanisms which have been finalised but are not currently enforced or implemented.
- Under development – mechanisms which are still in draft format or are planned for the near future.

A summary of the regulatory framework in place in each country, classified according to the various mechanisms and devices employed, is presented in Table 5. Table 5 shows the [widespread adoption of legislation to combat macro-plastics](#), in particular plastic bags, across the WIO region. In contrast, national regulatory measures are [rarely in place to address microplastics](#). Most countries have developed, or are [in the process of developing, policy or strategic plans on the management of land-based sources](#), and to a lesser extent marine-based sources of marine plastic litter. [Financial incentives have not been widely adopted](#), with only three schemes in place across the 10 countries.

Table 5 also illustrates the [large differences between countries in the WIO region in terms of the development and implementation of national measures](#) to combat marine plastic litter. Countries such as France/Reunion, Kenya, Mauritius and South Africa are more advanced in their use of regulation, policy and financial incentives to restrict and/or manage a range of plastic materials from both land- and marine-based sources. Conversely, Comoros, Madagascar, Mozambique, Somalia and Tanzania, while most have finalised regulations on plastic bags, are still at the early stages of addressing marine plastic litter through the development and implementation of national measures. In Mozambique and Somalia, policy documents (such as the National Action Plan to Combat Marine Litter in Mozambique and the National Environment Policy in Somalia) are being finalised this year 2021 and should provide a strategic platform for the implementation of measures to combat marine plastic litter.

While Table 5 provides an overall view of the regulatory framework in each country, it does not illustrate the content or the timeframe over which these measures have been put into place. To present the evolution of the measures across the region, a timeline has been developed for each device, or by type of plastic for the devices discouraging manufacture, import or use. These timelines are presented in the following sections, with corresponding comments on the implementation according to the interviewees (see the methodology section) and/or from the literature.

Table 5. Summary of the institutional and regulatory frameworks by country.

Device	Type of Plastic	Comoros	France/ Reunion	Kenya	Madagascar	Mauritius	Mozambique	Seychelles	Somalia	South Africa	Tanzania
Discouraging Manufacture/ Import	Plastic bags			⊘	⊘ <50 µm	⊘	⊘ <30 µm	⊘		⊘ <24 µm	∞
	Single-use plastics					⊘		⊘ balloons			
Discouraging Use	Plastic bags	⊘ Local and national	⊘ <50 µm	⊘	⊘ <50 µm	⊘	⊘ <30 µm	⊘		⊘ \$ <24 µm >24 µm	⊘
	Single-use plastics		⊘	⊘ in protected areas		⊘		⊘ balloons			
	PET bottles		⊘ water bottles in schools and public events	⊘ water bottles in protected areas		⊘ ban on bottles < 1L					
	Microplastics		⊘								
Extended Producer Responsibility		⊘ household packaging	⊘ * **	⊘ **		⊘ PET bottles		\$		⊘ Plastic packaging and SUPs	
Management of land sources			📄 📄	📄 📄 📄	📄	⊘ 📄 \$	📄		📄	📄	📄 local
Management of marine sources			⊘ waste in ports	📄		📄	📄	📄		⊘	

⊘ Legislation	📄 Strategic Plan/Policy	📄 Finalised and enforced	🟡 Finalised but not enforced	⊠ Commercial packaging, toys, fishing gear
👥 Industry Action Plan	\$ Financial Incentive	🟠 Under development	∞ Multiple measures	⊠** 19 products and packaging including plastic products

2.2.2. Regulatory framework timeline: plastic bags



2003	2006	2008-2010	2015	2016	2017	2019	2020	2021	
<p>South Africa</p> <p>Ban on plastic bags <24µm and levy on others.</p> <p>Fixed cost per bag has a larger impact on lower and middle-income households.</p> <p>Funds raised are not directed back into waste management.</p>	<p>Tanzania</p> <p>Ban use, import and distribution of plastic bags <30µm on Zanzibar.</p>	<p>Comoros</p> <p>Local bans on plastic bags in the Governorate of Ajouan (2008) and Commune of Mutsamudu (2010). Seem not to have been enforced.</p>	<p>Mauritius</p> <p>Ban on non-biodegradable bags. Not very successful, problems with enforcement, exceptions, and public education.</p>	<p>Mozambique</p> <p>Ban on plastic bags <30µm. Weakly enforced and lack of public awareness.</p> <p>Comoros</p> <p>Ban on plastic bags in city of Moroni. Enforcement is effective although still some non-compliance.</p>	<p>Seychelles</p> <p>Plastic bag ban. Seems to be effective.</p> <p>Reunion</p> <p>Plastic bag ban. Some circumvention of the law but greater biodegradable content.</p> <p>Madagascar</p> <p>Ban on plastic bags <50µm. Ban has not been well enforced.</p> <p>Kenya</p> <p>Ban on all plastic bags. Very effective for larger shopping bags. Smaller bags at markets harder to enforce.</p> <p>Tanzania</p> <p>National ban of plastic bags used for packaging alcoholic beverages.</p>	<p>Tanzania</p> <p>Ban on all plastic bags.</p>	<p>South Africa</p> <p>Amendment to regulations requiring minimum recycled content for plastic</p>	<p>Mauritius</p> <p>Plastic bag ban. Fewer exceptions than previous regulations. Still have a problem with enforcement.</p>	<p>Somalia</p> <p>Plastic bag ban is proposed.</p>

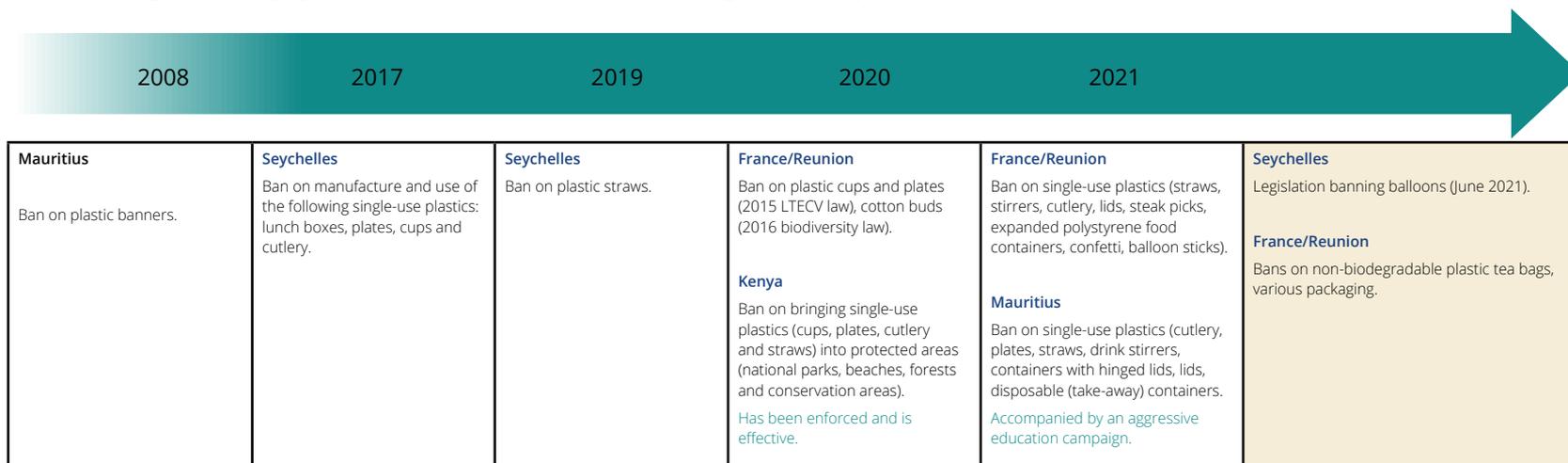
Regulation to combat plastic bags, mostly through the introduction of bans on use or both use and manufacture, is a widely adopted measure throughout the WIO region, with Somalia the only country lacking finalised legislation. However, the effectiveness of these measures varies considerably by country. Indeed some countries have not enforced the measures. On the other hand, Kenya, as responses from the interviewees suggest, supports the ban with enforcement including issuing fines and jail terms, and it has seen a dramatic reduction in plastic bag litter. Furthermore, the government claims that 80% of the population have stopped using plastic bags (BBC News, 2019). Thus, one of the main challenges encountered in the implementation of bans was enforcement. Indeed, UNEP has found that “the limited information that is available on restrictions and bans of single-use plastics indicate that policies and legislation can only be successful with sufficient monitoring and enforcement” (2018a). Additional challenges identified include a lack of public awareness and understanding of the underlying drivers, the development of a black market for plastic bags and illegal import from neighbouring countries.

The majority (7 out of 9) of the regulatory measures in place ban not only the use of plastic bags but also their manufacture and/or import. Many of the countries in the WIO region do not have a significant internal plastic manufacturing industry and therefore the majority of plastic products are imported. This presents an opportunity for these countries to restrict the importation of unnecessary plastics in order to reduce the quantity of plastic and encourage the use of alternatives.

In supporting the use of alternatives to plastic products, consideration needs to be given to both their availability, and public understanding of correct use and end-of-life recycling/disposal options. The availability of alternatives to plastic bags has been found to be an important success factor for bans (UNEP, 2018a). Public understanding of these alternatives is also important: in the Seychelles, where the plastic bag ban seems to be successful, the alternative (reusable) bags were found as litter items, and there was a perception that these are not made of plastic (University of Georgia, 2019). One interviewee noted that the alternative bags used in Kenya have also been identified within litter, albeit on a much smaller scale than the plastic bags they replaced.

South Africa, the first country to introduce legislation to reduce the use of plastic bags, is the only country to have also imposed a levy. While this initiative has been successfully rolled out, drawbacks of this approach include an unequal impact on individuals depending on their income level and the potential for retailers to profit from the sale of plastic bags (IUCN, 2020). Indeed, if not targeted at the correct level and point of application within the value chain, taxes can be ineffective (UNEP, 2018a). In 2020, the South African plastic bag regulations were amended to require a minimum recycled content, moving towards 100% by 2027 and the levy was increased from 12c to 25c. In addition, a review is currently being undertaken by the Department of Forestry, Fisheries and Environment to assess the implementation and effectiveness of the current policy on plastic bags and to identify options for a new policy direction (Osaka Blue Ocean Vision, 2020).

2.2.3. Regulatory framework timeline: single-use plastics



The creation and implementation of national regulatory measures to combat single-use plastics (SUPs) has been much more recent in comparison to those for plastic bags. This is consistent with global trends: by 2018, only 27 countries world-wide had any kind of ban on SUPs, compared to 91 countries with regulatory restrictions on plastic bags (UNEP, 2018). The Seychelles was the first country in the WIO region to target multiple types of SUPs with successive bans coming into force in 2017 and 2019. According to a litter survey undertaken in 2019, this has been effective to reduce the quantity of polystyrene food containers found as marine litter (University of Georgia, 2019). More recently, bans in France/Reunion, Kenya, and Mauritius have been implemented. It has been noted that adoption by vendors in France/Reunion is not universal. Initial feedback from Kenya and Mauritius is positive. As no legislation exists in the remaining six countries of the WIO region, this is an area which could be further developed. As for legislation on plastic bags, measures taken to limit SUPs should include consideration of available alternatives and be accompanied by effective public education and enforcement.

2.2.4. Regulatory framework timeline: PET bottles

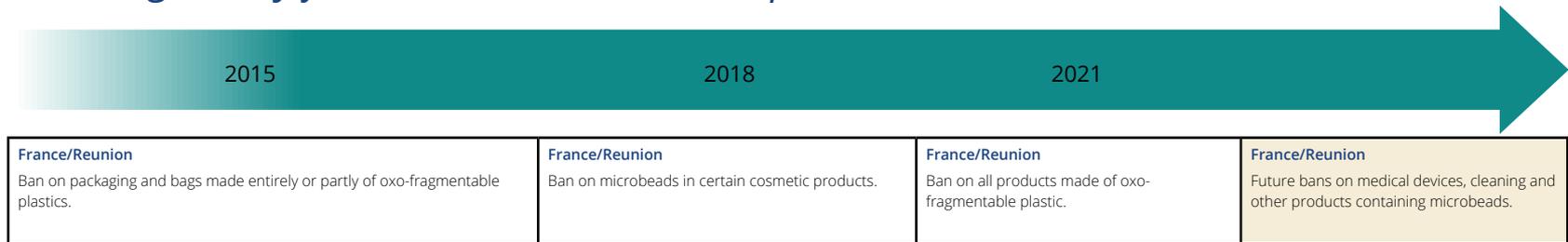


2001	2006	2007	2010	2014	2020	2021
Mauritius PET permit regulations requiring companies to obtain a permit to sell products in PET bottles.	Mauritius Introduction of excise duty of 1 rupee per bottle. <i>Funds are not directed back to waste management.</i>	Seychelles Levy on PET bottles. <i>Effective though reliant on the informal sector.</i>	Mauritius Excise duty increased to 2.3 rupees per bottle (including 15% VAT).	Mauritius Financial Incentive Scheme introduced to increase collection and recycling rates. <i>Has not been effective, unsure as to why.</i>	France/Reunion Ban on PET bottles for still water in schools. Kenya Ban on bringing PET bottles into protected areas (National parks, beaches, forests and conservation areas). <i>Has been enforced and is effective.</i>	France/Reunion Ban on free distribution of PET bottles at public events and businesses.
						Mauritius Ban on bottles <1L (Jan 2022).

Within the WIO region, Mauritius has adopted the greatest number of *measures relating to PET bottles, driven by a recognition of their role in the litter problem and the associated environmental and public health risks*. Initially, these efforts were aimed solely to regulate and manage importation and incentivise collection and recycling of PET bottles. These measures have, however, *not been particularly effective* at increasing the collection rate which remains at around 40 %. Future measures that are currently under development adopt a stricter approach and include a mandatory container deposit scheme (from October this year 2021) and a ban on PET bottles with a capacity of <1L (from January 2022). Furthermore, applying a levy on PET bottles has been effective in the Seychelles, a fellow SIDS, although this is largely dependent on the involvement of the informal sector (University of Georgia, 2019).

The limited number of countries adopting national measures targeted at PET bottles may, in part, be due to the high recyclability of this type of plastic. As a result, **PET is more likely to be a target for actions implemented by the private sector and NPOs** than the types of plastic which are more difficult to recycle. In South Africa and Kenya, Producer Responsibility Organisations (PROs – companies set up by industry to increase the recycling rate) actively support actions to collect and recycle PET, in partnership with NPOs, small business and recyclers. In South Africa, PROs also exist for other types of plastics (PolyCo for HDPE, LDPE and PP 2; SAVA for PVC and Polystyrene SA for PS). Based on the interviews conducted, the PRO model is considered successful in both these countries and may be considered by others within the WIO region where collection and recycling are currently lacking. Under the recently published EPR regulations in South Africa, targets for producers have been set for the recycled content of PET beverage bottles and flexible PET, and for the collection and recycling rates of all PET packaging.

2.2.5. Regulatory framework timeline: microplastics



As mentioned previously, **national measures relating to microplastics are currently limited**. At a global level, as of July 2018, only eight out of 192 countries had established national laws or regulations on microbeads (UNEP, 2018). France/Reunion is the only county in the WIO region with regulations currently in place, which address oxo-fragmentable plastics and microbeads. These measures come directly from national (French) policy and/or European Union (EU) directives and are in line with the G7 Global Plastic Charter. Microplastics are also a focus of the 2020 Zero Plastic Waste in the Ocean Action Plan.

Very few specific objectives to combat microplastics have been identified as part of national strategies in other WIO countries (although may be contained within the national action plans currently under development). The Kenya Association of Manufacturers Plastic Action Plan does recommend discontinuing use or banning of oxo-fragmentable plastics but does not mention microbeads. The Regional Action Plan for the PERSGA region (including Somalia) recommends introducing legislation to ban cosmetics containing microbeads as soon as possible, however this is yet to be acted on at a national level. In South Africa, the industry body Plastics SA is a signatory to the Operation Clean Sweep programme which aims to minimise plastic pellet loss, however at this stage this is purely industry driven and microplastics were not addressed in the recent revision to the National Waste Management Strategy. This issue was identified within regional assessments conducted in 2007 and 2009 (WIO Regional Action Plan for Marine Litter, 2018) and remains an area for improvement.

2.2.6. Regulatory framework timeline: extended producer responsibility

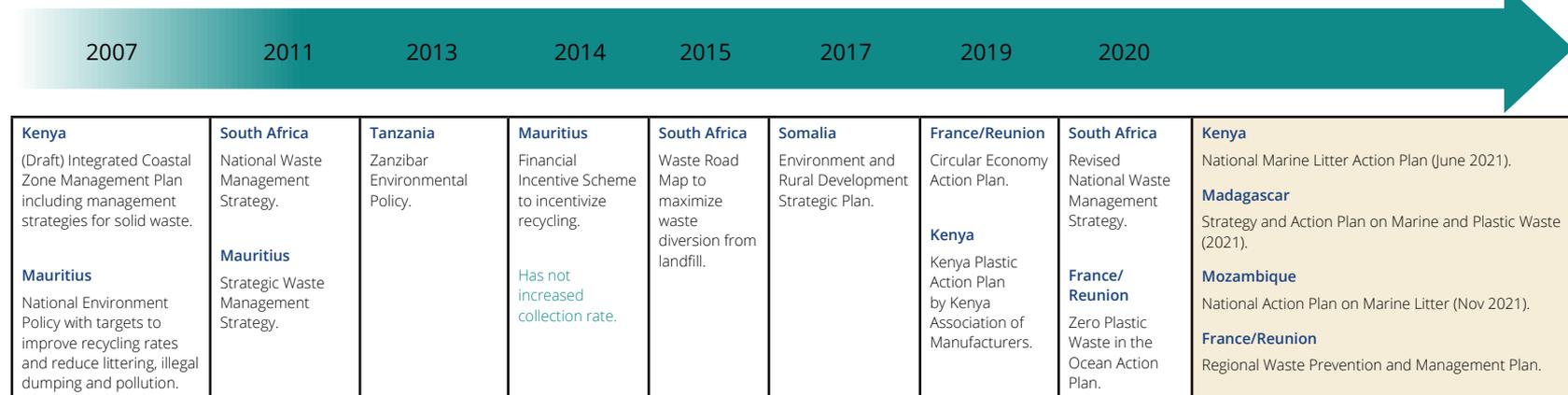


France/Reunion was the first country in the WIO region to adopt EPR as a mechanism for plastic management through the implementation of the national EPR scheme for household packaging managed by the PRO CITEO. Additional EPR schemes for plastic items will be implemented in the coming years.

Successful implementation of EPR schemes in other WIO countries is limited. The Seychelles has established a container deposit system for PET bottles (among other drink containers) not via legislation but rather through a Memorandum of Understanding with beverage producers, with funds collected managed by a Waste Management Trust Fund. Little or none are now found as litter items, demonstrating that the system is successful, although a 2016 study found that this is largely due to the informal sector collecting bottles from bins, litter and at the landfill (University of Georgia, 2019; Lai *et al.*, 2016).

In South Africa, legislation was passed in 2008 to introduce a government led EPR scheme for packaging. However, this system was not implemented following concerns from industry and a change of minister. Based on interviewee responses, the new EPR regulations, covering plastic packaging and SUPs are expected to be successfully implemented as it has both government and industry support. In their Plastic Action Plan published in 2019, the Kenya Association of Manufacturers indicated its support for an EPR scheme for many plastic items such as packaging, single-use plastics, bags, buckets and hangars, however the government has not developed relevant legislation.

2.2.7. Regulatory framework timeline: land-based sources



It is understood that the majority of marine litter originates from land-based sources, and enters the marine environment via rivers, run-off or through direct dumping (UNEP, 2017). In order to combat marine plastic litter, it is therefore vital to minimise these sources. [Across the WIO region, land-based sources of marine plastic litter are addressed mainly through policy, including Management Plans, Strategies and action plans on waste, the environment and circular/blue economy.](#) It is encouraging to note that recent documents tend to be more focused towards waste, plastics or marine litter rather than included within general environmental strategy indicating a growing recognition of the importance of the issue. However, as identified through the literature review and interviews, quantifiable targets, which assist in driving and monitoring progress, are missing in many instances.

[Improvements to infrastructure and collection systems, particularly in regional areas, were identified by numerous interviewees as a key aspect in combatting land-based sources of marine plastic litter.](#) A lack of recycling infrastructure, delivery of waste collection services and illegal dumping are all noted as challenges within South Africa's revised National Waste Management Strategy. While options for technical support (for example through the UNEP's Global Programme of Action for the Protection of the Marine Environment from Land-Based Sources) or funding (from donors) for infrastructure projects is currently available, to date, utilisation of these resources within the WIO region has remained limited and this therefore represents an opportunity for improvement in the future.

As mentioned previously, a government led financial incentive to encourage the collection and recycling of PET bottles is currently in place in Mauritius. Under this scheme, recyclers receive 20 rupees for each kilogram of PET recycled in excess of an initial threshold of 1 000 tonnes. Unfortunately, this scheme has not resulted in an increase in collection rates. A tax-reduction scheme was implemented in Kenya in November 2019 which offered a reduced corporate tax rate of 15 % for the first 5 years for any company operating a plastics recycling plant, however this was repealed in April 2020 (Deloitte, 2020). It is unclear whether this change is a reflection of the success or failure of the incentive, or is part of a general move to reduce tax incentives (Deloitte, 2020).

2.2.8. Regulatory framework timeline: marine-based sources



While at an international level there are numerous conventions (MARPOL, London Convention and Protocol, Abdijan Convention) and action plans (IMO, G20 and G7), **marine-based sources have not been comprehensively addressed at a national level across the WIO region**. In 2007, both Kenya and Mauritius released national strategic measures to address pollution from marine sources. The 2008 Integrated Coastal Management Act in South Africa is consistent with the London Protocol and makes no allowance for the dumping of plastic waste.

More recently, the national Zero Plastic Waste in the Ocean Action Plan includes nine actions targeting plastic waste on the coastline and in the sea including the implementation of the 2018 EU Directive on improvements to port waste management facilities. This is also in line with Action 4 of the WIO Regional Action Plan to “improve port reception facilities to effectively manage ship-generated waste”. The Seychelles Blue Economy Roadmap includes addressing ocean risks such as marine pollution as part of Strategic Priority 3 to secure healthy and productive oceans, however this is not accompanied by corresponding actions.

While recognising that land-based sources should remain a priority due to the relative quantities generated, further action could be taken across the WIO region to address marine-based sources of plastic litter at a national level. The implementation of action plans and other measures to combat plastic waste from fishing activities will not reduce the risk of unintentional losses to zero, however they are still required to reduce dumping and losses as much as possible.

2.3. Conclusions

The review of the regulatory framework reveals that [international conventions and agreements mainly focus on marine-based sources of litter](#). However, a 2017 report by UNEP found that compliance to these agreements “is not as carefully monitored as it should be; but steps are being taken to enforce compliance, to educate and provide a good understanding of the issues so that people voluntarily choose not to pollute”. In addition, while these agreements are in place, this does [not necessarily correspond to national level action](#).

[In terms of action plans and programmes, not all countries in the WIO region participate, or are able to participate, to the same degree](#). However, this difference is not significant enough to be a barrier to action, even in countries that are involved in the least number of international groups and bodies.

In terms of the national level regulatory framework, [bans on items such as plastic bags and SUPs have been tried in most countries within the WIO region](#). However, [not all have been followed up with enforcement](#) to ensure that the regulated measures are widely adopted. Strict enforcement, along with undertaking a corresponding education campaign, appear to be the most important factors in ensuring that the ban is effective. Reviews undertaken by the IUCN of the legal, policy and institutional frameworks for marine plastics in Kenya, Mozambique and South Africa underline the need for a cohesive legal framework with clear attribution of responsibilities between relevant bodies, as well as the means, will and cooperation in its implementation (Climate Carbon and Environmental Legal Consulting, 2020; Da Silva, 2020; Opondo, G., 2020). Regulatory measures to [restrict the distribution and/or use of other materials](#), such as PET bottles and microplastics have been used almost exclusively by island nations (Mauritius, Seychelles and France/Reunion) with [mixed success](#). While recent developments of strategies and action plans targeting land-based sources is encouraging, addressing insufficient waste management systems and infrastructure need to be recognised as a key factor in the prevention of marine plastic litter.



Sorting marine litter for recycling at Ecoworld Recycling (© Steve Trott)

3. Transversal analysis of the actions combatting marine plastic litter

134 initiatives which address the challenge of marine plastic litter through plastic management have been identified in the WIO region. The list of initiatives is as thorough as possible, having been completed through literature review and interviews with local stakeholders. This list of initiatives and their characteristics are presented in Appendix 4.

As mentioned in the introduction, the initiatives investigated deal with the different stages of plastic waste management: reduction of single-use plastics, promotion of eco-design, reuse, recycling, management of plastic waste, plastic-to-energy recovery. Thus, initiatives on awareness-raising and education, advocacy, litter clean-ups, research, networking and capacity-building (supported by many international institutions, see 2.1.2) have not been taken into account. On the two last subjects, much information can be found on the Global Partnership on Marine Litter from the UN Environment programme (UNEP, 2011)¹.

Moreover, the identified initiatives cover all the stages and scales of plastic waste management: from local small-scale private or NPO initiatives, to large-scale government (local or national) organized waste management measures or large-scale industry-run recycling facilities. Some initiatives of the same type were grouped in order not to overburden or to skew the statistics. This concerns the 300 smaller-scale plastics recycling processors in South Africa, and the 5 public waste and plastic waste collectors in France/Reunion, which were each grouped into one initiative "line" in the database.

In the interests of simplification, NGOs and NPOs have been grouped under the same denomination "NPOs".

The following sections describe the different initiatives, their impacts and the barriers they meet.

¹ <https://digital.gpmarinelitter.org/>

3.1. Location and scale of the initiatives

3.1.1. Location

Most of the identified initiatives addressing the marine plastic litter issue take place in South Africa (29 % of the actions), but also in **Kenya** (16 %), **France/Reunion** (15 %) and **Madagascar** (13 %) (Figure 2). Very few actions have been identified in **Somalia** (2 % - 2 actions) and **Mozambique** and **Seychelles** (each 4 % - 4 actions).

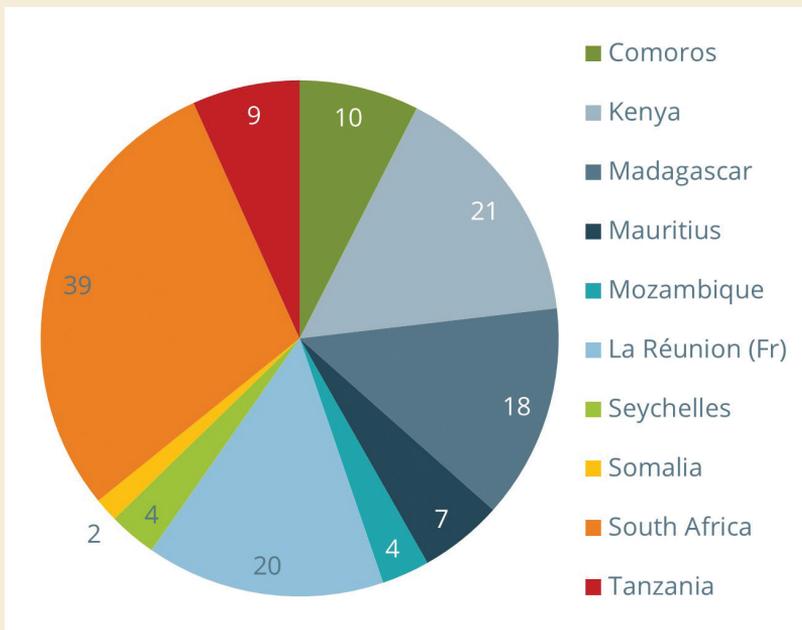


Figure 2. Number of identified actions per country.

This distribution of the initiatives reflects both the degree of engagement of the countries, through their governments, population, and all non-state stakeholders, against marine plastic pollution through plastic waste management, and also the maturity of their waste management system. This is generally true for most of the countries: South Africa, Kenya and France/Reunion have mature waste management systems and a global awareness about plastic waste and the marine litter issue, and many initiatives take place in these countries; Mozambique and Somalia on the other hand have limited waste management systems and few initiatives take place in these countries. However, some countries do not follow this rule: in the Seychelles, few initiatives have been identified even though their waste management system is quite mature; on the contrary in Comoros and Madagascar, several initiatives have been identified, even though their waste management systems still needs to develop. This may reflect the recent awareness of the stakeholders on the subject.

3.1.2. Scale

The wide majority of the initiatives are implemented at a local level (76 %) (Figure 3): in a specific city, in a few specific towns, on a specific landfill etc. (e.g. a local organisation collecting waste and upcycling it into furniture). 17 % of the actions are however implemented at a national scale (e.g. a national campaign in the Seychelles to reduce plastic bag use and promote alternatives), and a few concern several countries, either within the WIO region or abroad (e.g. manufacturers of plastic pyrolysis units or biodegradable plastic bags from manioc starch of international importance).

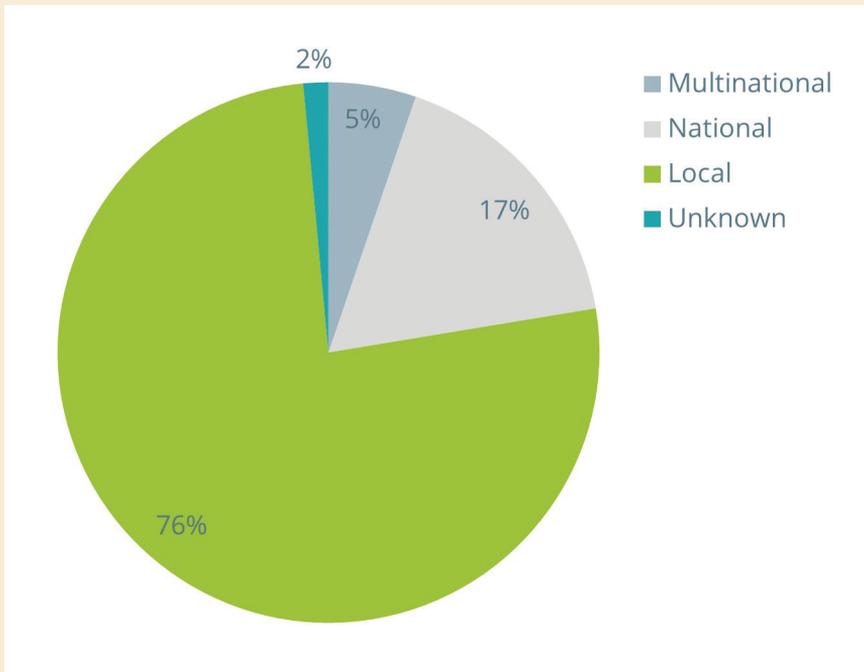


Figure 3. Scale of the actions implemented.

This distribution is consistent with the type of initiatives investigated: plastic waste is managed at a local level (city, county, etc.), depending on a local waste source. Moreover, the initiatives at a national level are local initiatives that have expanded to a larger scale in different locations in the country. Likewise, the initiatives at a multinational level are often local initiatives with international connections (international partnership, or conducted by an international NPO, or in different locations in different countries, etc.).

However, one initiative, Operation Clean Sweep, stands out due to its scale but also its other characteristics that will be discussed in the next sections of this report. This initiative is an actual multinational programme, involving the industries all over the world (see insert below).



Operation Clean Sweep

Operation Clean Sweep² is a campaign that has been led by the plastics industry for 25 years, and has been in place since 2013 in South Africa. It aims to reach zero plastic pellet, flake and powder loss to the environment. It is supported by plastic industry associations throughout the world and conducted by plastic resin producers, pellet transporters and transformers. The participating industries are provided with documentation to assist in the development of equipment, technical protocols, and training programmes to achieve this goal. They sign an engagement and obtain an engagement certificate in return.

Thus, this is an international initiative, focusing on microplastics. Its benefits for industries are economic: in losing less pellets, they lose less money, and environmental: contributing to reducing marine plastic litter.

2 <https://www.opcleansweep.org/>

3.2. Description of the implemented initiatives

3.2.1. Action type

The type of initiatives implemented to address the challenge of marine plastic litter are very diverse: they vary from avoidance of plastic to plastic collection, recycling or treatment. Some actions include more than one type of action (for example collection and recycling). As all types of action have then been analysed, the sum of the actions of each type is higher than the total number of actions (Figure 4).

The majority (48 %) of the initiatives concern recycling, whereby plastic waste is transformed into other useful products. These initiatives are undertaken mainly by the private sector (51 %) and NPOs (32 %), in South Africa (32 %) and Kenya (22 %). They cover very small-scale local initiatives (e.g. a coupe-Coupe repairer in Comoros³, recycling hard plastic into knife handles) to large-scale industry-plants (e.g. Extrupet⁴, in South Africa, currently recycling over 2.5 million PET bottles a day).

The other action types encountered are:

- **Avoidance** (7 % of the initiatives): Encouraging people to use alternatives to plastic. These initiatives cover local government waste prevention programmes in France/Reunion, as well as shops and hotels proposing alternatives to plastics (bulk-products, baskets instead of plastic bags and other alternatives to plastics like bamboo straws and metal water bottles, etc.).
- **Pellet loss avoidance** (1 % - 1 initiative): See insert on Operation Clean Sweep (p. 26).
- **Plastic-free eco-design** (8 %): Eco-design of products using alternatives to plastic. These initiatives, led by the private sector, consist in the production of biodegradable plastic bags, takeaway containers etc made out of plants and not oil.
- **Reuse of plastic items** (1 % - 1 initiative): Réparali Kafé⁵ (France/Reunion) repairs items, including plastic items in order to avoid them becoming waste.
- **Eco-design facilitating recycling of plastic products or their biodegradability** (1 % - 1 initiative): This private company produces recyclable and biodegradable plastic bags made from oil ("Bourbon Plastiques Emballage"⁶ in France/Reunion);

3 <https://documents.platforme-re-sources.org/wp-content/uploads/2020/12/A45-Etude-du-recyclage-a-Domoni-Comores-Deux-mains.pdf>

4 <https://petco.co.za/members/extrupet/>

5 <http://www.ekopratik.fr/>

6 <https://www.bpe.re/>

- **Collection** (20 %): Plastic waste collection in order to allow different types of recovery. These initiatives are often, but not always, combined with plastic recycling. They are undertaken by the private sector or NPOs (and in one instance by a local government). They cover local-scale projects, relying on informal collectors, as well as local government collection of household plastic waste (in France/Reunion).
- **Upcycling** (10 %): Transforming plastic waste into more valuable or higher quality products (art pieces, fabric, gift boxes, etc.). These initiatives are often small-scale and undertaken by the private sector, NPOs, or communities, sometimes by students. They sometime have an awareness-raising objective.
- **Plastic to energy or fuel** (4 %): Plastic waste is collected and transformed into energy through incineration, or into fuel using pyrolysis units. Although mostly led by the private sector or NPOs, we also notice the incinerator at the Port Louis Harbour⁷ (Mauritius) to treat waste on site instead of transporting it to landfill, even though it is not specific to plastics.

Some of these initiatives also include other aspects, such as awareness-raising, education, clean-ups and research. Even though these types of initiatives were not the aim of this study, we noticed many awareness-raising initiatives during our research.

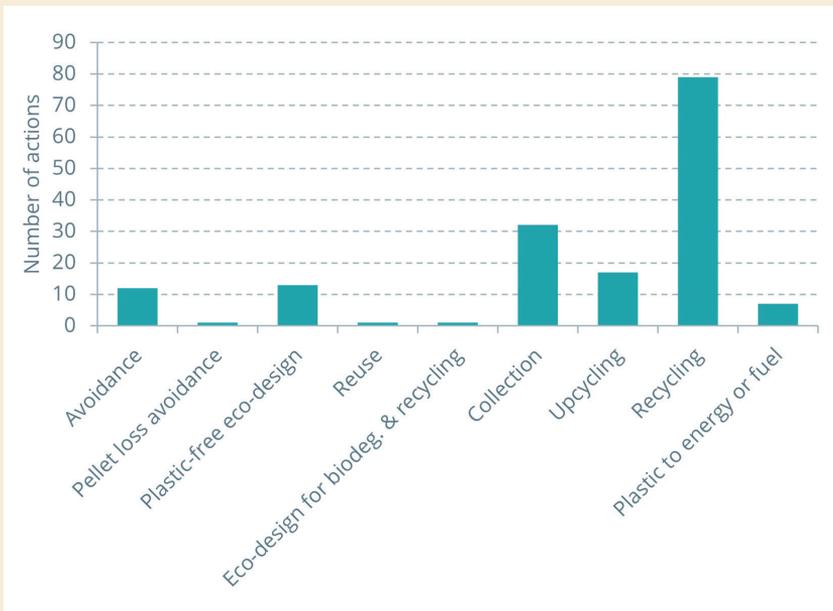


Figure 4. Type of actions implemented. NB: an action can be classified under multiple different types, so the total here is higher than the total number of actions.

7 <https://haat-india.com/Haat-The-Company/page.php?pagecode=HAAT-05-08-2018-PGOQBTRHKO>

The importance of collection and recycling initiatives indicates the **growing awareness** of stakeholders on this subject, but also **that opportunities exist to build profitable and sustainable businesses**. Although at very different scales, these types of initiatives exist in all WIO countries. The sustainability of such initiatives is also dependent on the existence of a market for recycled goods, which is not always the case, as the interviewees indicated for example in Comoros.

On the contrary, there are **few initiatives on more upstream activities** which limit the production of plastic waste at the source. These include plastic waste avoidance by discouraging the use of plastic or encouraging the use of alternatives, and eco-design, either to develop alternatives to plastics in product design or to facilitate recycling. Indeed, if plastic waste collection and recycling is important to deal with the existing plastic waste, more upstream initiatives are equally important to decrease the amount of plastic waste, and thus potential marine plastic litter, produced. Initiatives need to address the whole life cycle of plastics, from production to consumption and waste treatment.

3.2.2. Targeted plastics

Only one initiative focuses on microplastics: Operation Clean Sweep (see insert p. 26). All the other identified initiatives deal with macroplastics. This is consistent with the relative ease in capturing and processing macroplastics compared to microplastics. **Focusing on macroplastics also simultaneously addresses secondary microplastics**. Primary microplastics, however, require specific measures, but more focused on consumer education and legislative approaches to their management (UNEP, 2018a).

3.2.3. Sources of targeted plastic waste: generators

Most of the initiatives target plastic waste coming from litter and street picking (23 %) and household or commercial waste (50 %) (Figure 5). For some of the actions, the source of the plastic waste was unclear.

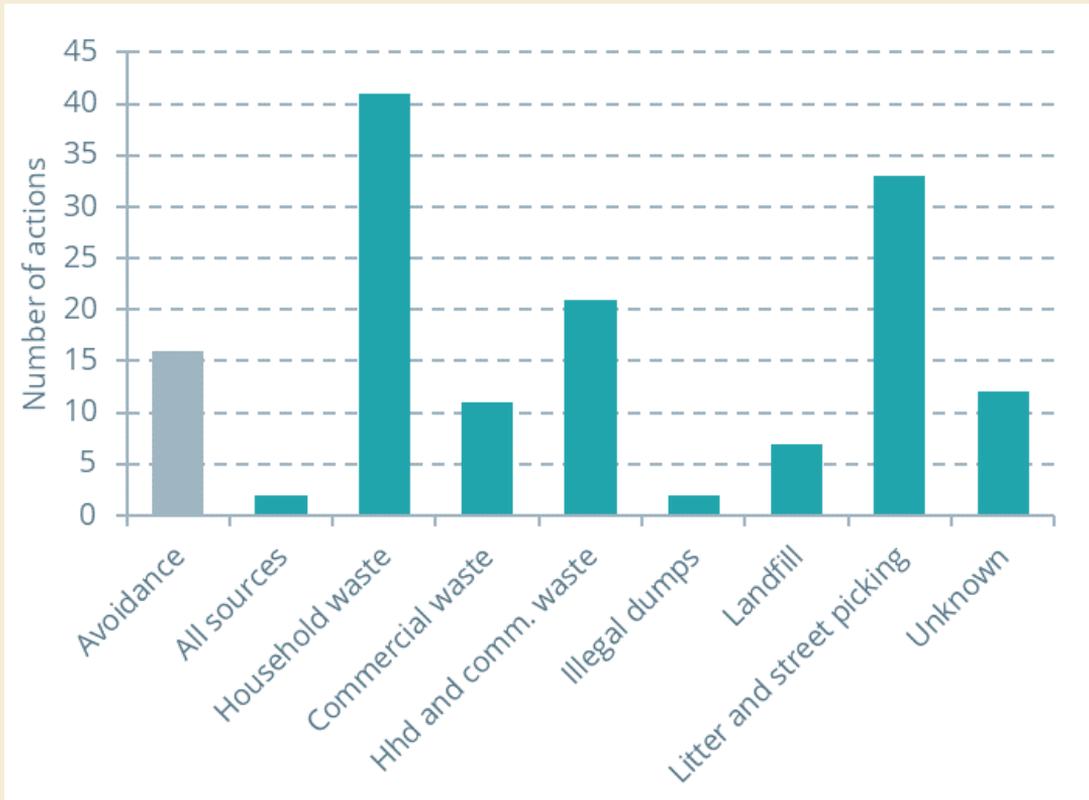


Figure 5. Source of the targeted waste. NB: an action may target different types of sources, so the total here is higher than the number of actions. The actions in light blue seek to avoid waste and thus do not target a specific source of plastic waste.

This distribution of the initiatives reflects partly the [existing collection system](#): when it is non-existent or limited, the plastic waste source is litter, and as [source separation is rarely in place](#), landfills and dumps are also a source of plastic waste for initiatives.

3.2.4. Sources of targeted plastic waste: environments

Most of the identified actions concern plastic waste from cities and towns (57 %) (Figure 6), often by focusing on plastic waste recycling. 17 % concern all types of environment, which are mostly actions to avoid plastic waste or comprehensive waste collection for all households (France/Reunion). A further 13 % concern specifically the coastline, and fewer still target landfill waste or plastic waste in rivers or National parks.

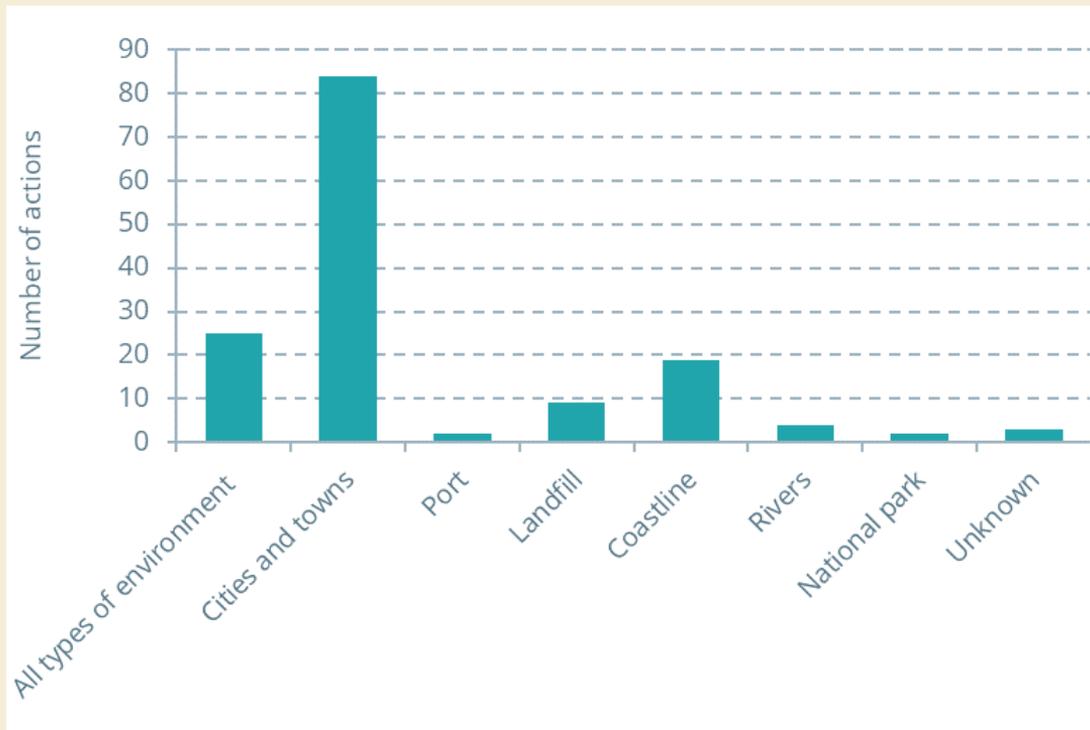


Figure 6. Targeted environment of the different actions. NB: an action can target different types of environments, so the total here is higher than the number of actions.

This is consistent with the [urban centres being the main waste, and plastic waste, source](#) (Thiel *et al.*, 2021). In this study, it was not possible to identify the initiatives which specifically targeted industrial waste, so it is possible that additional initiatives exist. Initiatives specifically targeting plastics waste in rivers are few and in drainage systems are non-existent, even though these are also important pathways to the ocean. However, many plastic waste collection initiatives do not mention the source of waste more in detail than stating the city in which it is generated and therefore could still include these sources.

3.2.5. Timeline

Most of the actions (60 %) started between 2010 and 2019 (Figure 7). We note a few very early actions (late 1980s) and some recent actions (2020). Most projects are apparently still on-going, even though this information must be taken with caution, as it is often difficult to assess.

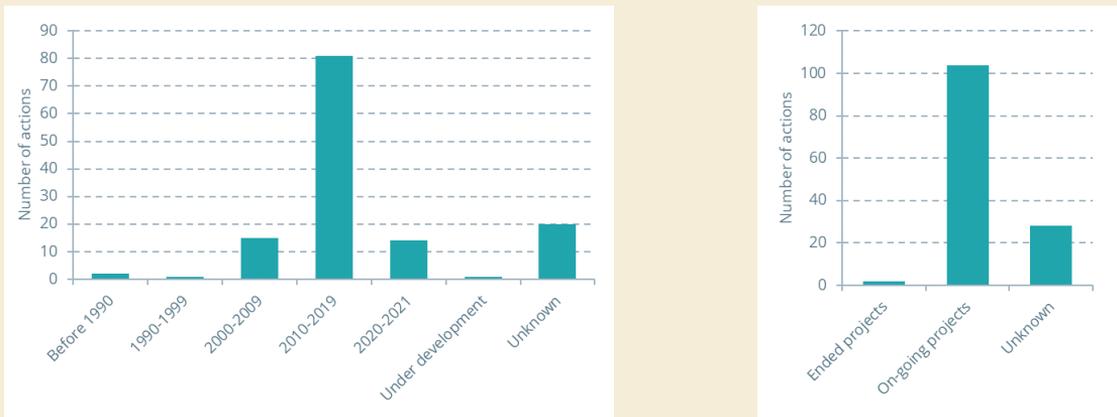


Figure 7. Starting date of the actions and on-going character.

This reflects an [increasing awareness about the plastic waste issue](#), since the 2000s, and even more since 2010. These dates also correspond to the [development of regulations](#) in most of the WIO countries (see 2.2. National and local regulatory framework). Some initiatives followed the implementation of regulations, others anticipated it, for example:

- Stasher⁸, in South Africa, started developing silicone bags in 2018, after the plastic bag ban of 2003.
- Compostable⁹, in France/Reunion, has produced takeaway containers made out of plants since 2019, anticipating the legislated ban of SUPs in 2020.

3.3. Stakeholders and partnerships

3.3.1. Implementing stakeholders

Most of the actions to address the marine plastic litter challenge are implemented by the private sector (51 %) and by non-profit organisations (NPO, including NGOs) (32 %) (Figure 8). It should be noted that under the classification as NPOs, there are sometimes community groups, structured as NPOs.

8 <https://stasherbag.co.za/>

9 <https://www.compostablereunion.com/>

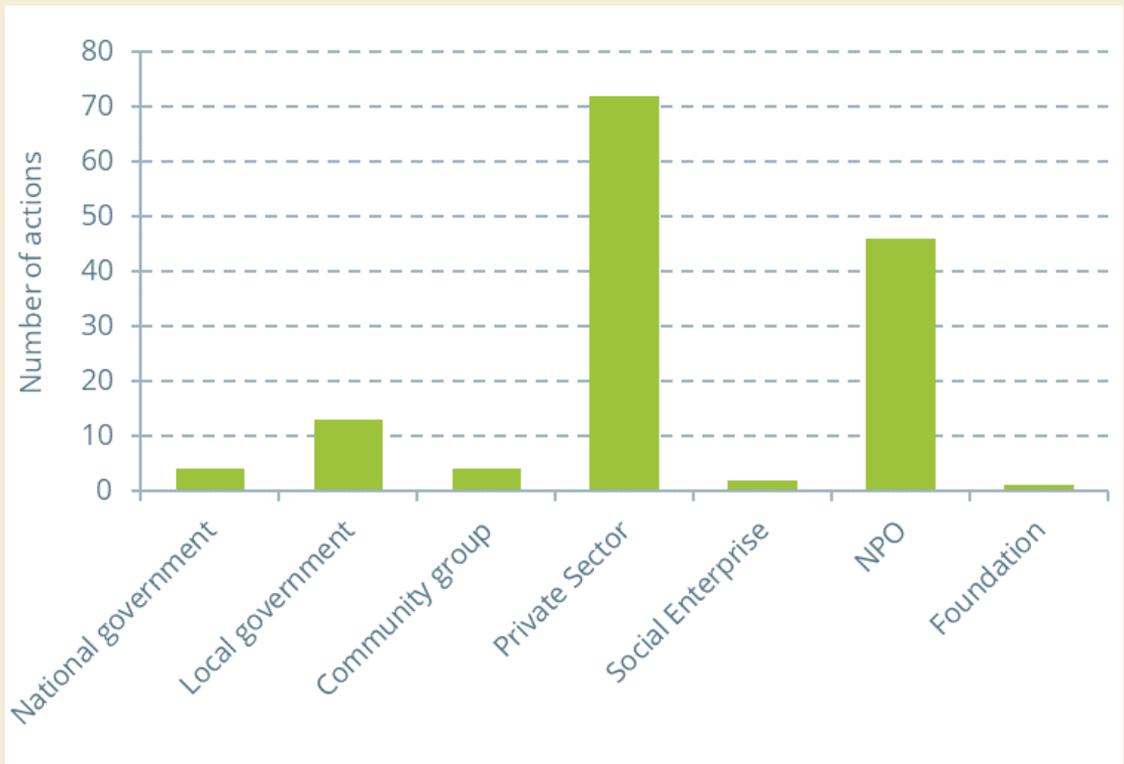


Figure 8. Stakeholder type for the different actions. NB: some actions are implemented by several stakeholders in partnership, so the total here is higher than the number of actions.

The importance of the private sector indicates that plastic waste management can be a profitable activity, where stakeholders see opportunities and have enough confidence to invest. This is well illustrated by the EcoAct Project in Tanzania (see insert below). However, incomes can be very low, in particular for informal collectors (Durand *et al.*, 2021).



EcoAct

“The solution”, described by EcoAct

“The business strategy is to create economic value on plastic at the points of generation to enable the households/farms/ companies to sort and sell plastics in order to earn income. In this way, no plastic will find its way on to the streets. The plastics will be transformed into more durable plastic lumber and planks.

The business has a big social impact as it generates employment for individuals at the initial stages of the value chain, mostly youth and women, who collect, sort and clean plastic waste for reselling. By the 3rd year of operation, we aim to create 100 direct and over 500 indirect jobs.”

The market and business model

“The total domestic fence market is approximately \$1 billion per year with the synthetic fencing segment being \$100 million per year with a historical 2% per year growth rate. Our goal, which is very achievable, is to capture two percent of the synthetic fence market, which is \$1.5 million, by 2020. Keeping in mind that we only face a few competitors in fencing and our product is stronger and more durable, priced considerably less, and greener.”

Source:https://static.globalinnovationexchange.org/s3fs-public/asset/document/Project%20Overview%20-%20EcoAct%20Tanzania_0.pdf?GDvtseo0fTGhUa6NC4IEDnYhijsqv_0u

The involvement of NPOs (including NGOs) and communities demonstrates their commitment to the subject, their convictions and engagement for the environment as a whole but also to their own local environment, as highlighted by the interviewees. Thus, they can be a driver in the development of sustainable projects.

National and local governments are involved in some countries, either on their own, or in partnership with the private sector. This can be through the implementation of plastic waste prevention and collection (France/Reunion), or in some recycling or waste-to-energy projects or pilot projects in South Africa, Seychelles, Mozambique, Madagascar, and Mauritius, indicating the growing awareness on the subject.

3.3.2. Partnerships

Most of the initiatives have multiple partnerships, either financial, technical or both (Figure 9).

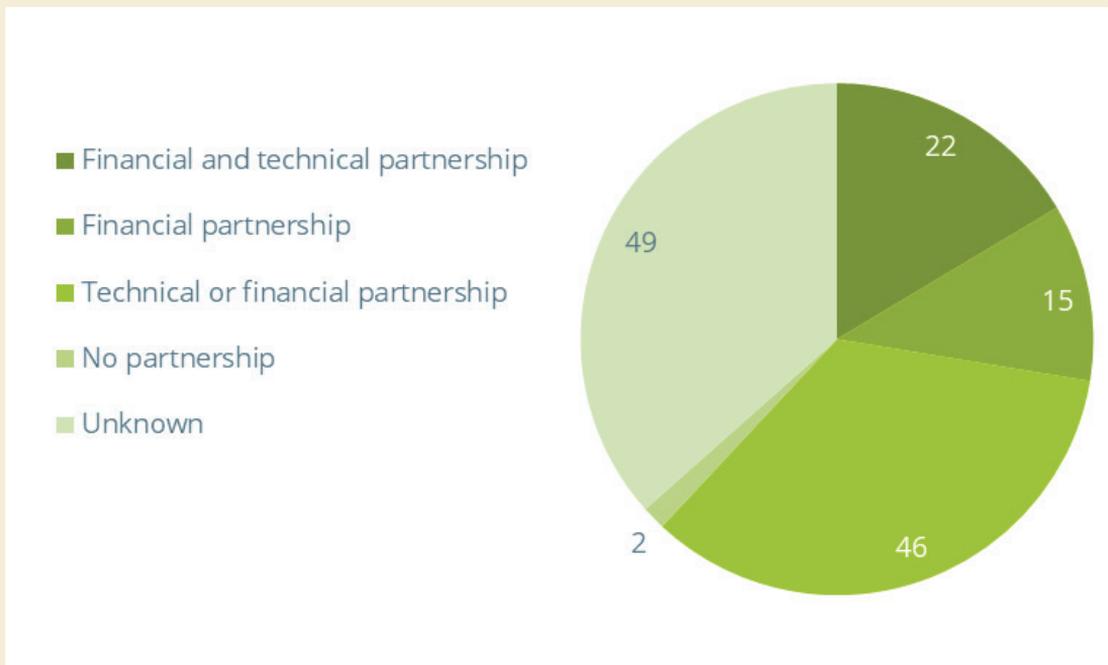


Figure 9. Partnerships for the different actions.

Partnerships are very diverse: sometimes with international funding bodies (Bank of Africa, UE), local public funding (Maroni council, Municipal Council of Maputo, etc.), with international NGOs (WWF), with international plastic users' groups (Coca-Cola), or local private sector (PETCO), etc. For example, the DMDP waste to value project¹⁰ in Kenya was undertaken in collaboration with WWF and PETCO.

We also notice some [important multipartner projects](#): for example, for the project Kwale Plastics¹¹ in Kenya, 16 businesses, a local government, an education centre, and a social NGO are listed as partners.

3.4. Qualitative analysis - Impacts and effectiveness of the initiatives

This section is based on our analysis of the initiatives and the elements collected during the interviews.

Even though "problems are the same across Africa", as stated by an interviewee, the situation concerning plastic waste differs greatly from one WIO country to the other, each country having its own level of development of the plastic waste management system, its own priorities and strategy, and its own organisational structure. Thus, the analysis of the initiatives needs to be adjusted depending on the countries, and likewise for the identification of barriers, needs, opportunities and recommendations.

The significant number of initiatives identified in the WIO region (from all public and private stakeholders combined) and their increase in recent years show [a rising awareness](#) on the subject of plastic waste. All WIO countries are concerned, as there is at least one initiative identified in each country. [Governments](#) are more and more aware of the plastic issue, launching initiatives and pilot projects, for example recently in Comoros, Madagascar, or for a longer time in South Africa, Kenya or France/Reunion, even though it is not always sufficient to address the issue. [Populations](#), on their side, also have a growing awareness on the subject in most of the WIO countries, which continues to develop with awareness-raising and education initiatives, or even with beach clean-ups that also have this effect. However, even though awareness is rising, this positive trend needs to be considered within the greater context as [the overall level of public awareness to waste and its impacts remains generally low and is noted by interviewees as "the biggest challenge"](#). Some inhabitants have long-lasting habits of disposing of their waste into rivers, the ocean, or deep ravines. This habit is not necessarily linked to a lack of waste management infrastructure, which can induce these behaviours e.g., in Comoros or Somalia, as it also is an issue in territories as South Africa and France/Reunion with mature waste management systems.

¹⁰ <https://dmdp.dk/projects/waste-to-value-tapping-the-market-for-recycle-plastic-in-kenya/>

¹¹ <https://www.kwaleplastics.com/>

In general, **there is a commitment of governments to act** against marine plastic litter and plastic waste in each WIO country. As discussed in section 2.2 on the National and local regulatory framework, all countries have implemented at least one institutional measure on the subject, and some governments have developed pilot projects for recycling and waste collection (e.g. Comoros, Madagascar). However, the situation is quite different from one country to the other. Indeed, addressing this issue means in first instance developing a plastic waste (and thus a general) waste management system to deal with the existing plastics. Some countries have **well-developed waste and plastic waste management infrastructure**, but **it lacks in other countries** (e.g. Comoros, Madagascar, Somalia) or it is not widespread through the whole country (e.g. Kenya). We can note that even in countries with adequate infrastructure, there are opportunities for improvement, for example they rarely segregate their waste at the source, which would create an easily accessible source of plastic waste for recycling. Where there is a lack of infrastructure, there often also is a **shortage of technical and funding resources** of local governments to implement plastic waste management, but also to develop initiatives. Moreover, even when a collection service exists some people in poor areas cannot afford to pay for the service, and service providers sometimes do not feel safe collecting in some areas, which adds another level of complexity. In these areas with lack of infrastructure, economic incentives for private initiatives, for example which pay collectors for their waste and economic enterprises that provide sustainable jobs to entrepreneurs, could be developed. This is where international support is particularly important.

Moreover, some countries have **other higher short-term priorities** than plastic waste management: disruption of terrorism, the COVID pandemic redistributing priorities towards health and not environment, etc. The **engagement of some governments is not high enough** to deal with the issue, or sometimes it is concentrated on waste management and not plastic waste management. **Unstable political situations or regular changes in government** are also factors mentioned by interviewees as threats to plastic waste management, as it hinders long-term policies (e.g. in Comoros, Somalia, South Africa). Moreover, **plastic waste is a complex issue**, linking industry and importations, pollution and health, nutrition, employment and poverty, education, communities and cities, etc. Thus, it induces a higher incentive for action, but also a higher complexity and there is a need for intersectoral and interministerial cooperation. We note the positive example of Madagascar on this subject, where plastic waste is addressed jointly by the ministries of the Economy and the Environment.

Regarding the initiatives in themselves, their **number is significant** in the WIO region, which reflects the dynamism of stakeholders, mainly coming from the private sector and NPOs. Some initiatives are pilot projects to test and develop new measures, supported by national governments (e.g. in Comoros, Madagascar) or by private stakeholders (e.g. in Kenya), and others are long-term sustainable initiatives. One example of the latter is the EcoWorld Recycling and Upcycling Facility¹² in Kenya, which received initial funding from the IUCN, and is now financially sustainable and continues to expand its activities. In some countries, the private sector is committed to managing plastic waste and for certain plastics, the recycling value chains are well functioning, as stated by several interviewees.

12 <https://swimsuit.si.com/travel/ecoworld-watamu-recycling-si-swimsuit-2019-destinations>

However, the initiatives are often at a local scale and the combination of all initiatives does not have sufficient amplitude to deal with the extent of the marine litter issue. This is even more evident in countries which lack infrastructure, technical and financial resources for waste management in general and plastic waste management more specifically. The identified initiatives do not sufficiently consider plastic waste at all its stages: many initiatives deal with plastics as a waste, through collection and recycling, which is absolutely necessary to address the existing plastic wastes. However, it is also important to develop prevention and plastic-free eco-design, to avoid generating plastic waste in the first place. As Marais and Armitage stated in 2004, to address litter, and thus marine plastic litter, an integrated strategy needs to be developed, including planning control, source control, and structural control. The aim is not to replace all plastics, as some are very convenient and support cost-effective activities, but to avoid plastic when it is not necessary and its life cycle as a useful product is short. For example, a target could be the plastics used and disposed of by tourists, like bottled water. However, this approach only works if there are existing alternatives to plastics, which are sometimes lacking. Eco-design for recycling also needs to be developed as not all plastics are currently recyclable. These upstream initiatives exist in the WIO region, but they would benefit from being further developed. In relation to clean-ups, even though they were not a target of our study, they cannot be considered as a solution to marine plastic litter, as they address the issue at too late a stage: if litter continues to come from land- and marine sources, “you clean up today, and waste is back tomorrow”. The identified initiatives also do not consider all plastic sources: very few were found for rivers, run-offs, and none on sewage sludge or wastewater treatment plants, etc. It would be interesting to prioritize actions toward the principal sources of plastic litter, which is already partly done, as initiatives often take place in cities and towns, the main current source of plastic. Moreover, the identified initiatives, except in one case, only target macroplastics, and not microplastics. Finally, the initiatives are not equally present within each country, for example in France/Reunion, they are concentrated along the West coast of the island.

Therefore, we can see that the identified actions are often not cohesive, they rely on private initiatives, whose role is not to consider the globality of the issue. Thus, there is a need to get to a larger scale, to coordinate the actions and also to link these local initiatives to national or local action plans, enabling the targeting of the main plastic hotspots or initiative gaps. Although this exists (not exclusively for plastic waste but for general waste) for example, in the prevention plans of the local governments of France/Reunion, it is rarely put into practice. For this, governments can rely on the existing initiatives and industries to build up plastic waste management, through public-private partnerships, by structuring private initiatives, and by developing incentives. There is already a great deal of innovation in Africa and some countries already have a culture of repairing objects rather than throwing them away: the need now is to accelerate and upscale the initiatives. Governments can share and capitalize on the positive experiences in other WIO countries through a peer support system. In order to build long-term waste management, initiatives need to be sustainable: this could be simply profitable for the private sector, but can also mean building win-win operations, with investment eventually

generating income for communities or reinvesting profits back into the community. For example, the funding of beach clean-ups by hotels, who benefit from tourists visiting clean beaches, or “Cash for Trash” that generates income, although on a small-scale and for local people only. Furthermore, **communities can also be good starting points** for the initiatives, as they benefit from less litter in their direct environment and from the income generated by waste sorting for example. This importance of working with communities was underlined during the interviews in particular in Mozambique, Comoros, Kenya. The developed measures also **need to include the informal sector**, if it exists, as part of the solution. This can be a combination of private initiatives and public components, where the private sector is missing, as described by Durand *et al.* (2021). However, this means that the public institution is present potentially in the non-profitable sectors, and thus needs funding. This could be provided by international institutions for the countries who need it.

Supporting and expanding on the existing initiatives could address a number of frequently encountered challenges, even more so if approached in a cohesive way. Sometimes, projects are launched with **insufficient financing** to ensure their long-term sustainability. **Market disruption** can occur, and in some countries, as in Comoros, recycled materials are not sought after and thus **there is no market** for these products. **Recycling is quite costly**, encompassing transport, equipment, processing cost, etc. and it often needs to be implemented at a large scale. This demands organized waste collection and transport which is not always possible. For example, in the island states, the quantities of plastic waste produced are too small to recycle on-site, and legal proscriptions prohibit waste export that would allow the consolidation of plastic waste (Indian Ocean Commission, 2018). Moreover, regarding recycling there often is a **lack of data** on the existing quantities of plastic waste (except in South Africa and France/Reunion), making it difficult to make projections of the needs for recycling facilities. Several projects address this issue, for example the EXPLOI project of the Indian Ocean Commission. Finally, outdated legislation and obtaining certifications for unconventional or new products and technologies can be an additional difficulty for the development of initiatives for the private stakeholders.

Various existing international programmes (for example EXPLOI , MARPLASTICCS , UNEP GPA , African Marine Waste Network , etc.) can assist the countries in the WIO region on the aspects discussed above, through **technical and funding support**, capacity-building etc. Some of the WIO countries are already engaged in these programmes. The support provided to the countries can be different depending on their waste management practices, either focusing on structuring waste collection and treatment or, for more advanced countries, to improve the economic and environmental aspects of their waste management. The international approach is even more important as marine plastic litter is a common issue that needs to be addressed at a regional level. However, some countries have difficulties in identifying the existing programmes, completing the funding demands that sometimes require extensive information inputs or communicating in English when it is not their native language. Moreover, some interviewees indicated that some international programmes are more useful for less developed countries, or that the programmes are too high level and do not address “on the ground” issues.

On another related topic, some interviewees mentioned the health risks related to plastic waste management. Informal waste collectors have no public health nor legal representation. Recycling activities are sometimes undertaken at a very artisanal level, with health risks for employees and neighbourhoods. Products recycled from marine plastic litter can contain Persistent organic pollutants (POPs) and be dangerous for the health (Conesa *et al.* 2021; Van *et al.*, 2012 ; Gomez *et al.*, 2020).

3.5. Conclusions

134 initiatives addressing the challenge of marine plastic litter through plastic management have been identified in the WIO region. Most initiatives take place in South Africa, Kenya, France/Reunion and very few actions have been identified in Somalia, Seychelles and Mozambique, globally reflecting the engagement of the countries, through their governments, population, and all non-state stakeholders, against marine plastic pollution through plastic waste management, and the maturity of their waste management system.

The initiatives are mainly implemented by the private sector and NPOs. Started mainly between 2010 and 2019, they concern mostly plastic waste collection and recycling, but rarely more upstream stages which limit the production of plastic waste itself (plastic avoidance, eco-design, etc.). Most initiatives focus on waste from cities and towns, coming from litter and street picking and from household or commercial waste, which are the main sources of waste. Very few initiatives targeting plastics in rivers, and none addressing plastics in wastewater, sewage and storm-drains were identified. Only one initiative focuses on microplastics. An overall assessment of the impact of these initiatives currently does not exist, due to a lack of baseline data.

The increasing number of initiatives since 2010 shows an increasing awareness of populations and of governments on the subject, as well as a commitment to act. Even though awareness is rising, general awareness about plastic issues still remains low and the initiatives are often at a small local scale. Even the combination of all initiatives does not have sufficient amplitude to deal with the extent of the marine litter issue. This is even more evident in countries which lack infrastructure, technical and financial resources for waste management in general and plastic waste management more specifically.

The significant number of initiatives, the dynamism of private and NPO stakeholders and the growing examples of sustainable initiatives are an opportunity, on which governments can rely on to build their plastic waste management strategy, integrating them in their action plans. They need to ensure the measures are cohesive, that they cover all stages of plastic waste management and first focus on plastic waste hotspots, and, where necessary, take charge of the aspects that are not yet covered. Various existing international programmes, in which some WIO countries are already engaged, can provide assistance on these aspects in the WIO region, through technical and funding support.



Research Assistant Kelsy Gill, Nora von Xylander and Danny Songwar working hard on macro-litter data collection from Beau Vallon beach, Seychelles (© The Ocean Project Seychelles)

4. Assessment of the impacts of measures

4.1. Individual assessment of the initiatives

Assessment of the implemented initiatives is rarely, if ever, carried out. Some initiatives indicate the quantities of plastic waste collected or treated, but it is difficult to assess this against the total amount of plastic waste generated, or the quantities of plastic waste avoided in the case of prevention measures. Moreover, the relationship between the quantities of plastics recycled or treated with the quantities of marine litter avoided seems very difficult to establish.

To assess the quantities of plastic waste diverted for recovery would require a full dedicated study, with a survey sent to all identified stakeholders, which was not possible during the timeframe of the present study. While this would be useful in the assessment of the effectiveness of the individual actions, a more useful approach may be to engage stakeholders in the collection of baseline data to track future developments and/or to gather data which can be used to track progress towards the achievement of quantifiable objectives within action plans. As well as providing up-to-date data, this system would engage stakeholders and demonstrate their role in the efforts to combat marine plastic litter at a national and regional level. For example in South Africa, Plastics SA conducts an annual Plastics Recycling Survey which identifies the quantity and sources of plastic collected for recycling across the country, including the role of the informal sector.

4.2. Overall assessment

The overall impacts of the different measures, both regulations and initiatives, on marine plastic litter are very difficult to assess.

Firstly, it is difficult to find an accurate and appropriate indicator to assess changes in marine plastic litter: the quantities of litter on beaches depends on the topography of the beach (Ryan *et al.*, 2018) and on beach clean-ups, part of the litter in the ocean sink rapidly to the bottom (Koelmans *et al.*, 2017), litter in run-off excludes other sources, plastic ingested by fauna raises the question of the relation with global plastic pollution (Ryan, 2008), etc. A global indicator of marine waste pollution, shared by researchers, is yet to be defined. However, each indicator can be taken separately and the trends can be analysed.

This raises two issues: first, the difference in units used from one study to the other, which makes it difficult, if not impossible, to compare the results of studies (Thiel *et al.*, 2021), and secondly the lack of long-term data in the WIO region, except in South Africa. Thus, there is a lack of baseline data and a lack of regular data collection that would enable the observation of the effect of particular initiatives on marine plastic litter. To remedy to this problem, in parallel with recent research studies, some projects exist to involve stakeholder participation, through online apps for example, to build assessment programmes. Pilot hotspotting projects have also been undertaken, according to the IUCN's *National Guidance for Plastic Pollution Hotspotting and Shaping Action* in Kenya, Mozambique, Tanzania and South Africa. They highlight areas of data limitation, but also demonstrate how available data can be used to formulate targeted actions.

The table below summarises the dates of the studies in the WIO countries.

Table 6. Dates of the studies on plastics (source: Thiel *et al.*, 2021).

Country	Date of the measures	Number of studies with data on plastic quantities	Comment
Comoros	2017-2019	1	Only one measure
Kenya	2019, 2020	3	Only one measure
Madagascar	1996-2002*, 2015, 2019	3	Non comparable units or plastic size
Mauritius	1996-2002, 2010, 2018	3	Non comparable units or plastic size
Mozambique	1996-2002*, ? (before 2001, date of the publication)	2	Non comparable units or plastic size
Seychelles	2003-2019, 2006-2008, 2013, 2019	4	Non comparable units
South Africa	Many years from 1984 to 2020	14	See comment below
Tanzania	1996-2002*	1	One measure

*In this study (Barnes, 2004), data come from different year for different locations between 1996 and 2002 but there is no timeline for the 10 WIO countries.

However, a global impact of the initiatives on marine plastic litter is indisputable. Recent studies (Okuku *et al.*, 2021, Ryan *et al.*, 2020) for example, assessing the impact of COVID on litter in Kenya and South Africa, conclude that there is a clear link between human activity levels, littering and marine litter.

From a qualitative point of view, some interviewees indicated that in beach clean-ups, quantities do not decrease with time, or that the existing initiatives are better than nothing, but clearly not enough to address the marine plastic litter issue.

More quantitatively, concerning pellets in South Africa where a temporal data set exists, Ryan (2008) pointed out that the number of plastic particles detected has not changed significantly between the 1980s and 1999-2006, but the proportion of virgin pellets has decreased by 44–79%. Subsequently, Weideman *et al.* (2020) observed a significant quantity of industrial pellets, which increased in abundance between 1996 and 2018-2019. The data of these two studies not being comparable, we can suppose that in the early 1990s plastics industry established education programmes (e.g. Operation Clean Sweep) to prevent the loss of pellets which resulted initially in a reduction in pellet loss, but that today, not all plastic manufacturers are containing spillages and leakage effectively.

Also in South Africa, in relation to plastic litter evaluation, Ryan *et al.* (2018) found no clear temporal trend in the amounts of plastics sampled between 1994 and 2015 on South African beaches. Sampling litter from 3 urban storm-water outlets in Cape Town, Weideman *et al.* (2020) observed a stability in the densities of plastics in residential areas between 1996 and 2018-2019, a decrease in industrial areas, and in mixed residential/commercial areas an increase by number but a decrease by mass. This illustrates the complexity of establishing a clear trend. However, considering the increase in population in Cape Town (80 % between 1996 and 2018-2019 (Weideman *et al.*, 2020)) and in the mass of plastics produced annually over the studies' periods, these results may indicate the impact of the existing initiatives and legislations, including an improvement in waste handling and a reduction of littering. However, measurements bias cannot be excluded, as Ryan *et al.* (2018) point out, the absence of a detected trend might be linked to beaches not being long-term sinks for mesodebris, or sampling protocol that is too shallow to detect long-term accumulation on beaches.



Plastic Bottle Bank at Malindi Marine Park with Kenya Wildlife Service (© Steve Trott)

5. SWOT analysis

The following Strength-Weaknesses-opportunities-Threats (SWOT) analysis summarises the different elements of the previous sections.

Table 7. SWOT analysis of the institutional framework and initiatives. Legend: In dark: regulatory framework, in blue: waste management, in grey: initiatives. *: some countries only.

Strengths	Weaknesses	
<p>Marine sources are covered extensively in international agreements and action plans</p> <p>Recent development of action plans targeting land sources of plastic waste and marine litter, completing policies and strategies</p> <p>*Implementation of regulations on plastic bags and SUPs effective, as is PET – PRO model</p> <p>*EPR: willingness of the industry to drive the system</p> <p>*Existence of plastic waste management services and infrastructure and data monitoring</p> <p>Numerous initiatives addressing plastic waste management (134 identified), positive feedback on long-lasting initiatives and development of pilot projects on plastic waste management</p>	<p>Lack of development of national strategies, regulations and initiatives on microplastics, limited national legislation on marine plastic sources</p> <p>*Lack of enforcement of plastic bags and SUP regulations in various countries. Gaps in regulations and laws on plastic waste management</p> <p>No possibility of consolidating small quantities of plastics to build cost-effective treatment facilities through transboundary exportations in the island states, due to regulations</p> <p>*Lack of waste and plastic waste management services and infrastructure, lack of funding and technical resources</p> <p>Lots of initiatives exist, but they are not sufficient to address the plastic waste and litter issue, and they are not cohesive and concerted</p> <p>Often lack of baseline data and harmonized monitoring of plastic waste to assess the impacts of the initiatives</p>	
Opportunities	Threats	
<p>Possibility to control the influx of plastics for countries without significant internal plastic production</p> <p>Peer support system between WIO countries</p> <p>Support from international bodies exists or is possible (funding, technical support, etc.)</p> <p>Development of plastic waste management based on existing positive initiatives and stakeholders</p> <p>Possibility to build economically positive operations (win-win, generate income, etc.)</p> <p>Increasing awareness of population and governments enabling further progress on the issue</p>	<p>Unstable political situations and priority given to sectors other than waste management</p> <p>Complex, multisectoral issue</p> <p>Influx of illegal material across borders in response to SUP and plastic bag bans</p> <p>EPR and levies: funds collected are not used for WM</p> <p>Difficult to find funding and build sustainable activities</p> <p>International institutions' programmes hard to access (need to be aware of the programmes, require extensive information for funding, English language only, high level programmes, etc.)</p> <p>General lack of awareness on (plastic) waste and plastic waste and on waste management practices</p>	
 Regulatory framework	 Waste management	 Initiatives



Machine crushed plastic at Ecoworld Recycling (© Steve Trott)

6. Recommendations

Based on the findings from the SWOT analysis, ECOGEOS has developed a series of recommendations, which relate to the regulatory framework, waste management and building on existing initiatives. These recommendations are presented in the sections below.

6.1. Regulatory framework

- Ensure that any regulatory measures, particularly bans, are accompanied by extensive public education campaigns as well as a strategy for ongoing enforcement (ensuring that sufficient resources and training are available). Countries without regulation targeting SUPs should examine the potential mechanisms, using the countries where measures have been implemented as case studies and learning from their experiences. The availability of alternatives to plastic products should be considered during the development of regulatory measures, especially bans.
- Governments considering the implementation of EPR schemes should collaborate with industry as part of its development to ensure their support for the system. As much as possible, funds collected through financial incentives such as taxes or levies should be redirected back to support waste management initiatives rather than being incorporated into general government revenue. PROs have proved successful management bodies in Kenya and South Africa and should be considered by other WIO countries to support the collection and recycling of plastics.
- Incorporate measures to combat the leakage of microplastics into the national-level regulatory framework. National-level measures should also be developed relating to marine-based sources of plastic litter, ensuring that these are consistent with relevant international-level conventions and agreements.

6.2. Waste management

- Recognise the importance of an effective waste management system (provision of collection services and availability of suitable recycling and disposal infrastructure) as a measure to prevent marine plastic litter and include improvements as part of action plans to combat the issue and future budgets to ensure services and infrastructure are adequately funded.
- Promote and develop upstream measures on avoidance and eco-design. Recognise that avoidance is vital in reducing not only the quantity of marine plastic litter but also the overall quantity of waste, thereby easing demand on services and infrastructure. Eco- or plastic-free design should be encouraged through the use of incentives or by limiting plastic importation in countries that do not have a significant internal plastic manufacturing industry and have difficulty recycling imported plastics.

- Across the WIO region, develop a baseline dataset which can be used to assess the impact of the existing and or future measures, at a national or local level, possibly involving NPOs and community groups in data collection activities.
- Integrate the informal sector in collection and recycling initiatives, recognising the vital role it plays in supplementing municipal collections reducing the quantity of mismanaged waste that contributes to marine plastic litter.

6.3. Building on existing initiatives

- Continue to develop awareness among governments and the general public on waste prevention, correct use of the available waste management services, and the environmental and public health benefits of the prevention of marine plastic litter.
- Integrate the existing initiatives into future action plans to build on the successful measures that are already in place and to ensure that the initiatives are cohesive and focus on plastic source hotspots and all stages of plastic waste management are covered, including plastic waste avoidance.
- Support “win-win” sustainable initiatives, which have not only environmental benefits but also positive impacts for individuals or the local community such as income generation, improvement to facilities or education. Where private initiatives are lacking this may require financial support from governments or donors, particularly the early stages of implementation.
- Involve local communities in actions as much as possible, recognising the important role they can play in driving actions, providing on-ground resources and support and affecting long-term changes.
- Promote markets for recycled goods to support artisans and businesses engaged in recycling.
- Facilitate access to international programmes and funding. This may be achieved through the use or development of a platform pooling information from the various institutions and donors, including translating the documents into the different languages used throughout the WIO region and supporting the completion of applications when needed.
- Encourage and participate in collaborative efforts between all types of stakeholders, in each country and between countries to maximise cohesion between actions and maximise learning from others’ experiences.
- Develop a data baseline and monitoring system to be able to assess the impacts of the existing initiatives and set quantifiable targets to drive progress and motivate stakeholders from all sectors.



A hawksbill turtle emerging on Grand Police beach captured by a research assistant during macrolitter litter collection
(© The Ocean Project Seychelles)

7. General conclusions

Since 2008, WIOMSA has collaborated with numerous organizations on studies and programmes concerning marine litter at a national and regional level. However, coordination and collaboration between the various stakeholders across the region has remained limited. In order to further its understanding of the issue of marine litter across the region, WIOMSA commissioned three interrelated studies to assess the status of marine plastic litter in the region.

This study corresponds to the third of these three interrelated studies, with the objective being to review policy and institutional frameworks on marine litter in the WIO region, including government and non-government (private sector, NGO, and community) actions and to analyse opportunities and needs. Through a literature review and 15 interviews, the international and national regulatory framework on plastic waste and marine plastic litter were analysed, and the initiatives addressing this issue through plastic waste management were identified and analysed.

The review of the regulatory framework revealed that international conventions and agreements mainly focus on marine-based sources of litter, and steps still are being taken to enforce compliance. In terms of the national level regulatory framework, bans on items such as plastic bags and SUPs or measures to restrict the distribution and/or use of other materials have been tried in most countries within the WIO

region, even though these are not consistently and thoroughly enforced, thus limiting the effectiveness of these measures. While recent developments of strategies and action plans targeting land-based sources is encouraging, addressing insufficient waste management systems and infrastructure need to be recognised as a key factor in the prevention of marine plastic litter.

Regarding the initiatives, 134 were identified across the 10 WIO countries, indicating a dynamic sector and a growing awareness, although these initiatives are not sufficient in number and scope to address the challenge. However, governments can build on these existing initiatives to develop their plastic waste management systems, implementing measures where gaps remain.

Finally, the analysis of policies and initiatives led us to a SWOT analysis and to the prescription of recommendations at three levels: regulatory measures, waste management system and initiatives, in order to better address the marine plastic litter issue, in a more comprehensive and collaborative way.

8. Appendices

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Appendix 2: List of interviewees

We gratefully acknowledge the participation of the following interviewees in the study. While the interviews were held partly to gain of understanding the official position of the organisation they represented, the responses also included the personal viewpoints of the interviewees. The analysis undertaken as part of the study was based on ECOGEOS interpretation of the answers provided combined with the information gathered from other sources as part of the literature review.

1. Representatives by Country

Country	Name	Position	Organisation	Interview Date
Comoros	Housoyni Housseni	General Directorate	Environment and Forests (DGEF)	26/02/2021
Reunion Island	Margot Thibault	PhD student : Plastic Pollution in the Indian ocean gyre	The Ocean Cleanup / Université de la Réunion	10/03/2021
Kenya	Steven Katua	Deputy Director	National Environment Management Authority (NEMA)	12/03/2021
Madagascar	Noeline RAKOTOVELO	Directorate General	Ministry of Environment and Sustainable Development	24/02/2021
	Jacquis Rasoanaina	Focal Point	Nairobi Convention	26/02/2021
Mauritius	Ram Seenauth	Divisional Environmental Officer	Integrated Coastal Zone Management Division	24/02/2021
Mozambique	Jorge Mafuca	National Director	National Fisheries Research Institute /Ministry of Sea, Inland Waters and Fisheries	11/03/2021
Seychelles	No contacts available for interview			
Somalia	Kenadid Mumin Cali	Focal Point	Nairobi Convention	8/03/2021
South Africa	Sumaiya Arabi		Department of Environment Forestry and Fisheries	10/03/2021
Tanzania	No contacts available for interview			

2. Regional Contacts

Organisation	Name	Position	Interview Date
Indian Ocean Commission	Gina Bonne	Head of ExPLOI project	23/02/2021
	Martine Hippolyte	Technical Assistant	
IUCN	Peter Manyara	Regional Project Officer GMPP / Marine Plastics & Coastal Communities (MARPLASTICCs)	25/02/2021
UNEP-GPA	Heidi Savelli- Soderberg	Programme Officer	16/03/2021

3. Private Sector/NPOs

Organisation	Name	Position	Interview Date
Plastics SA	Douw Steyn	Director Sustainability	18/02/2021
Chris Whyte & Associates	Chris Whyte	Managing Director	24/02/2021
Watamu Marine Association	Steve Trott	Projects Manager	17/03/2021

Appendix 3: Framework for telephone interviews with a representative from each of the 10 countries

Name of the representative, position and country

The order of the subjects in the following framework doesn't necessarily follow the order of the questions addressed during the interview but corresponds to the structure of the minutes of the discussions.

1. Introduction
Context of the study
<ul style="list-style-type: none"> • Broadly outline the study (objectives, scope) and the reasons for selecting this representative • Explain briefly how the discussion will proceed
2. Policy and Regulations
2.1.National (or regional) context
<ul style="list-style-type: none"> • Presentation of the existing waste management system, and more specifically the plastic waste management system (collection systems, sorting, reuse, recycling and disposal infrastructure...) • Organisation of the responsibilities for waste and plastic waste prevention and management, including role of the informal sector where applicable (promotion of eco-design, financial responsibility of the producers...) • Formation of partnerships with other governments, the private sector, non-government organisations • Were partnerships created to meet technical, financial or human resources needs? • Awareness of the population regarding waste management issues (global understanding) • Awareness of major sources, priority areas and impacts to facilitate the plastic waste management • Implication in international agreements
2.2. Existing policy and regulations
<ul style="list-style-type: none"> • National or regional regulations relating to plastics: prevention, litter, recycling targets <ul style="list-style-type: none"> • Type (plastic bottles/bags, microplastics) and sources (coastline, cities, landfill) of waste targeted • Creation of objectives and/or KPIs • Governance (distribution of responsibilities, key bodies) • Implementation (timeline, human resources and financial requirements, policing) • Effectiveness/monitoring of progress

2.3. Evaluation
<ul style="list-style-type: none"> • Efficiency and relevance of the existing policies and regulations • Identify areas of success. What were the success factors? • Identify difficulties encountered and limitations • Key gaps and future goals • Planned future partnerships
3. Actions
3.1.Existing Actions
<ul style="list-style-type: none"> • Awareness of the actions already identified and description of any additional actions <ul style="list-style-type: none"> • (ex: plastic waste prevention, reduction of the consumption of single use plastics, promotion of eco-design (improvement of product design for recycling and avoiding the use of plastic in favor of more environmentally friendly materials), reuse of materials, improvement of recycling, better global management of plastic waste, adoption of innovative technologies to reduce plastic leakage in the environment...) • On plastics, microplastics, microbeads... • Awareness of existing partnerships and potential funding (with NGOs, communities, the private sector, government structures...)
3.2. Evaluation
<ul style="list-style-type: none"> • Efficiency and relevance of the actions, engagement of the stakeholders, strength of the current partnerships • Awareness of any particular successes or failures. Could these have been enhanced or prevented? • Future opportunities: <ul style="list-style-type: none"> • Potential partnerships to benefit existing actions and/or create additional actions • Suggestions to fill gaps, any 'low-hanging fruit'
4. Summary
<ul style="list-style-type: none"> • Overall, how well is plastic marine litter being managed? • What are the major requirements for future works? (regulations, community awareness, funding, cooperation...) • Transmission of any documents of literature if available • Any final comments

Appendix 4:

PART I – Database of policies

Location		Description of the policy/regulation					Stakeholder	Dates			Sources	
Location	Scope of intervention	Summary	Description	Action type	Waste targeted	Marine Plastic waste type	Organization(s) involved	Year (start)	Year (end)	Comments on the implementation	Sources	Contacts
South Africa, France	Multinational	G20 Action Plan on Marine Litter	Commitment to preventing and substantially reducing marine litter and its impacts by 2025 and support of the Sustainable Development Goals	International agreement	Marine Plastic Litter	All size plastics	G20 countries	June 2019	on-going	Hamburg 2017 - G20 Action Plan on Marine Litter was launched then after at Osaka the "Blue Ocean Vision" was launched	G20 report " Actions on Marine Plastic Litter" and the website of Osaka Blue Vision	
Kenya	National	National directive that bans single-use plastic in protected areas	The Wildlife Management and Conservation Act 2013 (section 116.2 (d)) banning single-use plastic in National Parks, beaches, forests and conservation areas, which means visitors will no longer be able to carry plastic water bottles, cups, disposable plates, cutlery, or straws into protected areas.	National Regulation	single-use plastics - cotton buds, Cutlery, plates, straws and stirrers, Sticks for balloons and balloons, Food containers (some fraction of plastic polymer), Cups for beverages (some fraction of plastic polymer) Beverage containers (PET bottles), Cigarette butts, Bags, Cripps packets, sweet wrappers, bread bags and confectionery wrappers, Wet wipes and sanitary items.	Macroplastics	Government of Kenya	June 2020	on-going	"Ban will come into effect on 5 June 2020 (World Environment Day). Consultation of diverse stakeholders (NEMA, KAN, PETCO Kenya) before the implementation of the ban. Implementation plan published February 2020"	Government's report and UNEP website	
Kenya	National	Plastic bag ban	"The Environmental Management and Co-Ordination Act (cap. 387) bans the use, manufacture and import of all plastic bags used for commercial and household packaging. The law is considered as one of the stricter of the WIO region - plastic bags are banned regardless of their thickness"	National Regulation	Plastic bags	Macroplastics	Government of Kenya	August 2017	on-going	"Bans announced 4 times since 2005 and have face opposition from manufacturer, individually and through the Kenyan Manufacturers Association Announced in February 2017. Before the ban the regulations were developed through a consultative process of all the stakeholders in the country. In 2018, Kenya's National Environment Management Authority (NEMA) tried to extend the plastic bag ban to include single-use plastic containers - like bottles - made from PET however this did was not successful. In March 2019 polypropylene bags were banned until a quality standard for reusable bags was introduced, however manufacturers and traders challenged this and the ban was reversed (polypropylene is currently permitted)"	"Website of NEMA. UN reports "Legal Limits on Single Use plastics and microplastics" and "Single-use plastics, a roadmap for sustainability" https://www.nema.go.ke/index.php?option=com_content&view=article&id=279&Itemid=430 "	
South Africa	National	Plastic bag ban - Ban on plastic bags with a thickness of 24 microns or less, but local manufacture for export allowed	REGULATIONS UNDER SECTION 24(1) OF THE ENVIRONMENT CONSERVATION ACT (ACT NO. 73 OF 1989) - prohibits the manufacture, trade and commercial distribution of domestically produced and imported plastic carrier bags and plastic flat bags unless the bags comply with the "Compulsory Specifications". The Compulsory Specifications require plastic carrier and flat bags to have a minimum thickness of 24 microns. Exceptions are made: "The prohibition in relation to minimum thickness does not, however, apply to the following items: bread bags; refuse bags; bin liners; household plastic bags; primary packaging and plastic bags for exports. Fine if the law is not respected - a fine or imprisonment for a period not exceeding 10 years or to both such fine and imprisonment. This new regulation was combined with a nominal levy on retailers of ZAR 0.04 (¢ 0.04) on 24 litre bags.	National Regulation	Plastic bags	Macroplastics	Government of South Africa	2003	on-going	"Announced in 2003 Government considering bans for microplastics, single-use plastics (cotton buds, plastic plates, cups, cutlery)"	UNEP report "Legal Limits on Single-Use plastics and microplastics" and "Single-use plastics, a roadmap for sustainability", IUCN report "The legal policy and institutional measures frameworks governing marine plastics in South Africa"	
Madagascar	National	Plastic bag ban - Prohibiting the production, importation, marketing, stocks building and use of plastic bags of thickness less than or equal to 50 Microns	Decree No. 2017-010 - exceptions for pharmaceutical products and laboratories as well as plastic packaging of imported or local final products. Plastic bags are considered hazardous waste. Sanctions - suspension of trading and temporary or permanent closure of an establishment selling plastic bags.	National Regulation	Plastic bags	Macroplastics	Government of Madagascar	2017	on-going	Announced in 2017. Before this decree, an another decree existed (Decree 2014 - 1587) (Decret 2015). The 2017 one considers plastic bags as dangerous waste BUT some measures were abandoned - in the 2014 decree if the law was not respected, fines and imprisonment were possible, in the 2015 decree biodegradable bags were banned.	UN report "Legal Limits on Single-Use plastics and microplastics" text of the law, master thesis of PANORAMANTENANA article "LA REGLEMENTATION DES DECHETS ET LA LUTTE CONTRE L'APPROGRESSION DU PLASTIQUE A MADAGASCAR"	

Location		Description of the policy/regulation					Stakeholder	Dates			Sources	
Location	Scope of intervention	Summary	Description	Action type	Waste targeted	Marine Plastic waste type	Organization(s) involved	Year (start)	Year (end)	Comments on the implementation	Sources	Contacts
Tanzania	National	Plastic bag ban - Bans the import, export, manufacturing, sale, supply, storage and use of plastic carrier bags regardless their thickness.	THE ENVIRONMENT MANAGEMENT (PROHIBITION OF PLASTIC CARRIER BAGS) REGULATIONS, 2019. Exemptions are made - plastic or plastic packaging for medical services or industrial products or construction industry or agricultural sector or food processing or sanitary and waste management. Fine if the law is respected - depending of the situation (specified in the text of the law)	National Regulation	Plastic bags	Macroplastics	Government of the United Republic of Tanzania	June 2019	on-going		Un report "Legal Limits on Single-Use plastics and microplastics" and government's website of Tanzania	
Mauritius	National	Legislation on single-use plastics - Ban apply to single-use plastic products	Environment Protection (Control of Single-Use Plastic Products) Regulations 2020 - ban ten plastic products in the island (plastic cutlery (forks, spoons, knives, chop sticks), disposable plates, straw, drink stirrers (stirrers), containers with hinged lids, lids of plastic containers and single-use plastic, disposable (take-away) containers. As from January 15, 2021 has been issued on Wednesday 22 July, 2020, No individual will have the right to own, use, sell, distribute, import and manufacture the above-mentioned plastic products. Offenders will be liable to a fine as follows: fine not exceeding Rs 2,000 for possession and use of plastic products, fine not exceeding Rs 20,000 for sale and distribution, fine not exceeding Rs 50,000 for import and fine not exceeding Rs 100,000 for manufacturing.	National Regulation	Single-use plastics - plastic cutlery (forks, spoons, knives, chop sticks), disposable plates, straw, drink stirrers (stirrers), containers with hinged lids, lids of plastic containers and single-use plastic, disposable (take-away) containers.	Macroplastics	Government of Mauritius	January 2021	on-going	Announced in 2020	Un report "Legal Limits on Single-Use plastics and microplastics" and government's website of Mauritius	
Mauritius	National	Plastic bag ban - Ban on plastic bags, except biodegradable plastic bags or compostable plastic bags which conform to the appropriate standard	Environment Protection (Banning of Plastic Bags) Regulations 2020 - Ban on plastic bags, except biodegradable plastic bags or compostable plastic bags which conform to the appropriate standard. The law ban the 3 types of plastics bags exempted in the former regulation from March 2001. Fine not exceeding Rs 2,000 for possession and use of plastic product - Rs not exceeding 2,000 for sale and distribution, fine not exceeding 100,000 for manufacturing, import and export of plastics bags, non-biodegradable and non-compostable bags	National Regulation	Plastic bag	Macroplastics	Government of Mauritius	January 2021	on-going	Environment Protection (Banning of Plastic Bags) Regulations 2020, is a more severe version and more developed of the Environment Protection (Banning of Plastic Bags) Regulations 2015 (it was implemented in 2016). Announced in 2020	Un report "Legal Limits on Single-Use plastics and microplastics" and government's website of Mauritius	
Mauritius	National	"Environment Protection (Polyethylene Terephthalate (PET) bottle Permit) Regulations 2001"	Permit required for bottling in PET bottles, distinctive mark must be applied to allow identification. Permit holders required to submit and annual report detailing the number of PET bottles produced, collected, recycled and exported	National Regulation	PET bottles	Macroplastics	Government of Mauritius	2001	on-going			
Mauritius	National	Financial Incentive Scheme	*Provides financial incentives to encourage PET recycling In 2014, Rs 15 per kg of PET were provided for the export for recycling in excess of 1000 tonnes and Rs 20/kg in excess of 1500 tonnes * This was revised in 2015 and the incentive was Rs 5 per kg of PET exported for recycling in excess of 1 tonne to encourage small operators * In addition, to encourage recycling of PET locally, an incentive of Rs 15 per kg of PET recycled has been introduced since July 2018 * In 2019, the incentive was increased from Rs 5 to Rs 15 per kg for the exportation of waste PET for recycling in excess of 1 tonne*	Financial incentive	PET bottles	Macroplastics	Government of Mauritius	2014	on-going		MAU 2019 doc	
Seychelles	National	Plastic bag ban - Ban on manufacturing, importation, distribution of plastic bags except biodegradable bags	Environmental Protection Act, 2016 (Act 18 of 2016), Environment Protection (Restriction on manufacturing, importation, distribution and sale of Plastic Bags) Regulations 2017. The manufacturing, importation and sale of plastic bags, for use within the Republic of Seychelles, which does not fall into the category of exempted plastic bag as specified in the First Schedule are hereby prohibited (exception for bags for disposal of waste, pharmaceutical dispensing, agricultural purposes, airport, exportation ...) Fine - Not exceeding SCR 20, 000 or to imprisonment for a term not exceeding one year, or to both such fine and imprisonment.	National Regulation	Plastic bag	Macroplastics	Government of Seychelles	June 2017	on-going	Announced in 2017	Un report "Legal Limits on Single-Use plastics and microplastics", text of the law and the "Circularity Assessment Protocol (CAP): Plastic Leakage Results and Recommendations"'s report	
Seychelles	National	Legislation on single-use plastics - Ban on single-use plastic items	Environmental Protection Act, 2016 (Act 18 of 2016), Environment Protection (Restriction on importation, distribution and sale of Plastics Utensils and Polystyrene Bowls) Regulations 2017. The manufacturing, importation and sale of plastic utensils and Polystyrene bowls for use within the Republic of Seychelles is hereby prohibited (except the importation of biodegradable utensil and biodegradable bowls) Fine - not exceeding SCR 20, 000 or to imprisonment for a term not exceeding one year, or to both such fine and imprisonment. The single-use plastics are the following - lunch boxes, plates, cups and cutlery	National Regulation	Single-use plastics products - lunch boxes, plates, cups, cutlery	Macroplastics	Government of Seychelles	June 2017	on-going	Announced in 2017	"UN report "Legal Limits on Single-Use plastics and microplastics", text of the law and "Circularity Assessment Protocol (CAP): Plastic Leakage Results and Recommendations"'s report. http://www.nations.org/indc/7473/ governments sets out to ban balloons by June hopes to implement glass bottle levy scheme this month	

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Location		Description of the policy/regulation					Stakeholder	Dates			Sources	
Location	Scope of intervention	Summary	Description	Action type	Waste targeted	Marine Plastic waste type	Organization(s) involved	Year (start)	Year (end)	Comments on the implementation	Sources	Contacts
			Environmental Protection Act, 2016 (Act 18 of 2016) , Environment Protection (Restriction on manufacturing, importation, distribution and sale of Plastic Straws Regulations, 2019) : The manufacturing, importation, distribution and sale of plastic straws for use within the Republic of Seychelles are prohibited. Exception are made: plastic straws which form part of pre-packaged beverages or any other, pre-packaged products. Fines: not exceeding SCR 20,000 or to imprisonment for a term not exceeding one year, or to both such fine and imprisonment.		Plastic straws			June 2019		Announced in 2019		
			Legislation under development		Balloons			April 2021		Importation banned from 1 April, full ban in place 2 months later (1 June)	http://www.nations.com/stories/7473/ governments sets out-to-ban-balloons-by-june-hopes-to-implement-glass-bottle-levy-scheme-this-month	
Comoros	Local	Plastic bag ban	Ban on the sale of plastic bags within the capital city of Moroni	Local Regulation	Plastic bags	Macroplastics	Mayor of Moroni	2016	on-going			
Réunion Island (France)	National	Plastic bag ban	Law n° 2015-992 of 17 august 2015 LTECV - Article 75/ Decree n° 2016-379 of 30 march 2016 raising the implementation method for the limitation of single-use plastic bags: Ban on lightweight bags under 50 microns, except compostable bags made of bio-sourced materials. Minimum bio-sourced content of single-use plastic bags to gradually increase from 30% on 1 January 2017 to 60% on 1 January 2022.	National Regulation								
Réunion Island (France)	National	Legislation on single-use plastics	Law n° 2015-992 of 17 august 2015 LTECV - Article 73 : From January 1st, 2020, distribution of disposable "cups and plates made out of plastic" is prohibited	National Regulation	Cups and plates	Macroplastics	Government of France	January 2020	on-going	Announced in 2015	Zero Waste France "Synthesis of the current and forthcoming bans on disposable products in France" and the website of the government	
Réunion Island (France)	National		Law n° 2016-1087 of 8 august 2016 biodiversity - Article 124/ Decree n° 2017-291 of 6 march 2017 relating to the conditions of implementation of a ban of the sale of cosmetic products used for exfoliation or cleansing containing solid plastic particles and cotton buds for domestic use with a plastic stick	National Regulation	Cotton buds and microbeads	All size plastics	Government of France	January 2018 (microbeads) January 2020 (cotton buds)	on-going	Announced in 2016	Zero Waste France "Synthesis of the current and forthcoming bans on disposable products in France" and the website of the government	
Réunion Island (France)	National		Various laws (EGALIM, Biodiversity, Circular Economy and Anti-Waste) On January 1st, 2021 banning out plastic bottles (containing beverages) for free is forbidden in establishments welcoming an audience and in professional premises and contractual clauses ordering the supply or use of plastic bottles in festive, sporting or cultural events are forbidden. Plastic disposable straws are banned (including bioplastic straws), except those intended for medical use (falling under the directive 90/269/CEE or the directive 93/42/CEE). Disposable plastic mixing sticks are banned (including those in bioplastic), disposable plastic forks, knives, spoons and chopsticks (including those in bioplastic) are banned except those used in penal institutions, care facilities and in air, rail and marine transportation, which benefit from an exemption until July 3rd, 2021. Plastic closing tools and glass/cup lids are banned (including those in bioplastic). Plastic steak picks are banned. Plastic food containers for cooking, heating and service are banned in collective catering services in schools and academic institutions, in childcare centres, paediatric/obstetric/maternity wards, and in perinatal centres.	National Regulation	Straws, stirrers, cutlery, lids, steak picks, expanded polystyrene food containers, confetti, balloon sticks	Macroplastics	Government of France	2021	on-going	Announced in 2018	Zero Waste France "Synthesis of the current and forthcoming bans on disposable products in France" and the website of the government	
Mozambique	National	Plastic bag ban : Ban on plastic bags less than 30 microns	Ban of the production, import, wholesale and retail of plastic bags with a thickness below 30 micrometres, except for those used for weighing foodstuffs, disposal of MSW and those produced in the EPZ. No free distribution of plastic bags, or marketing or distribution of plastic bags containing >40% recycled materials in establishments selling food products	National Regulation	Plastic bags	Macroplastics	Government of Mozambique	2016	on-going	Announced in 2015	"UNEP reports "Legal Limits on Single-Use plastics and microplastics" and "Single-use plastics, a roadmap for sustainability" http://am.bzi.comteudo/en/1109/new-regime-for-plastic-bags-in-mozambique/ "	
Réunion Island (France)	National	Legislation of plastic water bottles	Various laws (EGALIM, Circular Economy and Anti-Waste) On January 1st, 2020, stillwater plastic bottles are banned in school canteens. From 2021 free distribution of water bottles at public events and in businesses is prohibited	National Regulation	PET bottles	Macroplastics	Government of France	2020 (school canteens) 2021 (other)	on-going			
Réunion Island (France)	National	Legislation on oxo-fragmentable plastic	Law for the ecological transition and green growth (LTECV) bans the production, distribution, sale, provision and use of packaging and bags made entirely or partly of oxo-fragmentable plastic	National Regulation	Oxo-fragmentable plastic bags and packaging	Microplastics	Government of France	2015	on-going			

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Location	Scope of intervention	Summary	Description	Action type	Waste targeted	Marine Plastic waste type	Organization(s) involved	Year (start)	Year (end)	Comments on the implementation	Sources	Contacts
Reunion Island (France)	National	Legislation on single-use plastics	DIRECTIVE (EU) 2019/904 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 5 June 2019: Cotton buds, Cutlery (forks, knives, spoons, chopsticks) Beverage stirrers, Food containers made of expanded polystyrene, i.e. receptacles such as boxes, with or without a cover, used to contain food which (a) is intended for immediate consumption, either on-the-spot or take-away (b) is typically consumed from the receptacle, and (c) is ready to be consumed without any further preparation, such as cooking, boiling or heating, including food containers used for fast food or other meal ready for immediate consumption, except beverage containers, plates and packets and wrappers containing food. Beverage containers made of expanded polystyrene, including their caps and lids; Caps for beverages made of expanded polystyrene, including their covers and lids.	European Regulation	Single-use plastics : cotton buds, cutlery, stirrers, and polystyrene food containers, cups and lids	Macroplastics	European Union	2021	on-going	Announced in 2019	Zero Waste France "Synthesis of the current and forthcoming bans on disposable products in France" and the text of the law	
South Africa	National	Legislation on the Extended Producer Responsibility (EPR) mechanisms	National Environmental Management: Waste Act, 2008 : extensive provisions relating to waste disposal, management, and recycling, with a particular emphasis on EPR, empowers the Minister to directly impose 'extended producer responsibilities' (i.e. EPR measures) upon a product or class of products. In this instance, the nature of those responsibilities is determined by the Minister, and not the industry. Once these products are identified, the Minister may specify the EPR measures that must be taken in respect of that product and identify the persons or category of persons who must implement the measures. This includes how an 'extended producer responsibility programme' is implemented and operated, financial arrangements, institutional arrangements, the percentage of products to be recovered, design or composition requirements of the product or packaging and similar requirements. The NWMS has clarified that the EPR mechanisms set out in this section are only to be used where the Industry Waste Management Plans have proven to be ineffective and require the Minister (and not industry) to specify the required measures.	National Regulation	Plastic packaging	All types of waste	Government of South Africa	2009	on-going	In 2017, the Minister called on the Paper and Packaging Industry (among others) to prepare and submit Industry Waste Management Plans for approval. The Notice applies to producers, including producers of plastic packaging. Producers are required to register with and subscribe to at least one approved plan. The notice also required the plans to be aligned to the "National Pricing Strategy for Waste Management (Extended Producer Responsibility, government managed model)". It expressly provided for the development and registration of Producer Responsibility Organisations (PROs) for the registration and implementation of the plan. The draft plan was submitted in September 2018, including Packaging South Africa's consolidated multi-stream Industry Waste Management Sector Plan. The draft plan did not however follow DEFF's preferred pricing model. On 19 December 2018, the Minister published a notice withdrawing her decision to call for Industry Waste Management Plans (in terms of Section 28) on the basis that none of them complied with the criteria specified by the Minister. On 5 November 2020, the Department of the Environment, Forestry and Fisheries, gazetted regulations for a mandatory Extended Producer Responsibility (EPR) scheme for the lighting, electrical and electronic equipment, and paper and packaging sectors.	UN report "Legal Limits on Single-Use plastics and microplastics" (UNEP report). The legal policy and institutional measures frameworks governing marine plastics in South Africa	
South Africa	National	The South African Plastic Pact Roadmap : shared vision agreed upon by businesses, governments and organisations to address plastic pollution at source.	By 2025: All members commit to : eliminate problematic or unnecessary plastic packaging through redesign, 30% average post-consumer recycled content across all plastic packaging innovation or alternative (re-use) delivery models, 100% of plastic packaging to be reusable, recyclable or compostable, 70% of plastic packaging effectively recycled.	National agreement	Plastics	Macroplastics	23 members : Clicks Group, Danone, Disenl, HomeChoice, Masmart, Mygals, Nampak Rigids, Pick n Pay, Polypak, Polysplank, Shoprite Group, SPAR, Spur Holdings, The Foschini Group, Tigerbrands, Tully, Unilever, ADIS, Waste Plan, Woolworths, Coca-Cola Africa and RCL Foods ...	January 2020	on-going	WWF-South Africa decided to develop the South African branch of the Ellen MacArthur Foundation's Plastic Pact international network	WWF-SA report on plastics, articles from local newspapers, Roadmap of the SA Plastic Pact	info@saplasticpact.org.za
Comoros, France, Kenya, Madagascar, Mauritius, Mozambique, South Africa, Tanzania	Multinational	MARPOL (International Convention for the Prevention of Pollution from Ships)	Annex V addresses garbage from ships, including complete ban on disposal of all plastics at sea.	International agreement	Macroplastics including fishing gear and contents of lost containers	Macroplastics	156 states	2018	on-going	Marine Environment Protection Committee (MEPC) has established a timeline for implementation including short-, medium- and long-term follow-up actions		

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South Africa	National	National Environmental Management Integrated Coastal Management Act	Chapter 8 - Marine and Coastal Pollution Control prohibits incineration or dumping at sea without a permit (consistent with London Protocol, no allowance for plastic)	National policy	All wastes, including plastics	All types of waste	Republic of South Africa	2008	on-going	Minor amendments in 2014 on incineration and dumping		
"France, Kenya, Madagascar and South Africa Convention and Protocol, Tanzania Convention only"	Multinational	London Convention and Protocol	Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter. The Protocol is an update and prevents all dumping (permits for exceptions for dredging material, fish waste, specific bulky items, sewage sludge, vessels and platforms, organic material of natural origin and CO2 streams)		All wastes, including plastics	All types of waste	"Convention: 86 states Protocol: 40 states"	1975 (Convention), 1996 (Protocol)	on-going			
All WIO countries	Multinational	Basel Convention Plastic Waste Amendments	"Aim to "improve and promote the ESM of plastic waste at the global, regional and national levels and to prevent and minimize its generation so as to, among other things, reduce significantly and in the long-term eliminate the discharge of plastic waste and microplastics into the environment, in particular the marine environment." 4 Working Groups, each with a Work Plan 2020-2021"	International agreement	All plastics	All size plastics	188 states	November 2019	on-going		http://www.basel.int/implementationof/BaselWaste/PlasticWastePartnership/tabid/8096/Default.aspx	
Kenya	National	(Draft) Integrated Coastal Zone Management Policy	"Recognises "impacts of marine and land-based activities on the marine environment. These include agriculture, improper disposal of liquid and solid waste, waste disposal and pollution from ships, and potential development activities lead to increased siltation, floating debris, and environmental degradation." Management strategies: - Improve the implementation of municipality by-laws on disposal of liquid and solid waste in relation to the solid waste regulations, increased awareness of individuals on disposal of solid waste - Proper disposal of solid and liquid waste and mitigation for probable pollution sources through effective monitoring, control and response. - Feasibility studies for waste management/disposal sites should be carried out"	National policy	All wastes	All types of waste	Government of Kenya	2007	on-going			
Mauritius	National	National Environment Policy	"Relevant National Targets: "minimise pollution from nautical activities"; "Raise the overall recycling rate of Municipal Solid Wastes to 25%"; "Reduce and eventually eliminate anti-social behaviours (littering and illegal dumping)" Government will "Promote Regional and International Cooperation under the various Multilateral Environment Agreements (MEAs), inter alia, the Nairobi Convention dealing with the protection, management and development of the marine and coastal environment," plus range of commitments relating to waste management (although none specifically addressing marine litter)	National policy	All wastes	All types of waste	Government of Mauritius	2007	on-going			
Somalia	National	Environment and Rural Development Strategic Plan	"Strategic Goal 2: - Ensure sustainable and consumption patterns. Actions include: - Establish appropriate institutional framework for integrated management for all types of wastes - Promote recycling schemes and collection points i.e. water bottles and plastic bags - Develop dump sites and landfills"	National strategy	All wastes	All types of waste	Government of Somalia	2017	2021			
South Africa	Multinational	Abidjan Convention	Article 5 - Pollution from ships, Article 6 - Pollution caused by dumping from ships and aircraft, Article 7 - Pollution from land-based sources, Article 8 - Pollution from activities relating to exploration and exploitation of the sea bed	International agreement	All wastes	All types of waste	22 west and central African countries	1984	on-going	Additional protocol land-based pollution sources in 2012		
All WIO countries	Multinational	IMO Action Plan to address Marine Plastic Litter from Ships	"The Action Plan was created to enhance existing policy and regulatory frameworks and introduce new supporting measures including enforcement, improving port facilities and awareness raising. Specific identified measures include: - a proposed study on marine plastic litter from ships; - looking into the availability and adequacy of port reception facilities; - consideration of making marking of fishing gear mandatory, in cooperation with the Food and Agriculture Organization (FAO); - promoting reporting the loss of fishing gear; - facilitating the delivery of retrieved fishing gear to shore facilities; - reviewing provisions related to the training of fishing vessel personnel and familiarization of seafarers to ensure awareness of the impact of marine plastic litter; - consideration of the establishment of a compulsory mechanism to declare loss of containers at sea and identify number of losses - enhancing public awareness; and - strengthening international cooperation, in particular FAO and UN Environment."	Action Plan	Marine Plastic Litter	All size plastics	International Maritime Organisation (174 member states)	2018	2025	"Concrete measures outlined at meeting 74 in 2019 including formation of a Correspondence Group to finalise the draft Strategy. Actions to be completed by 2025"		

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All WIO countries	Multinational	Nairobi Convention Strategic Action Programme	"Nairobi Convention provides a framework for cooperation and collaboration across the WIO region Strategic Plan recognises marine litter/solid waste as a key pollution category"	Strategic Plan			Governments, civil society and private sector	2009	on-going			
Comoros, Mauritius, Seychelles	Multinational	SAMOA pathway	"57(d) To address marine pollution by developing effective partnerships, including through the development and implementation of relevant arrangements, such as the United Nations Environment Programme Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, and, as appropriate, instruments on marine debris and on marine, wastewater and other marine pollution, and through the sharing and implementation of best practices; 65(b) To provide and operate appropriate facilities and infrastructure for safe drinking water, sanitation, hygiene and waste management systems. 71 In this regard, we acknowledge the following actions to improve the management of chemicals and waste: (a) Enhancing technical cooperation programmes, including those under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal... the London Convention and Protocol and the International Convention for the Prevention of Pollution from Ships, to strengthen national, regional and international mechanisms for the management of waste including chemical and hazardous waste, ship- and aircraft-generated waste and marine plastic litter... (b) For States that have not done so, considering becoming parties to and ensuring an enabling environment for the implementation, including with technical and other appropriate support, of the multilateral environmental agreements on chemicals and waste... (c) Implementing reduction, reuse, recycling, recovery and return approaches in accordance with national capacities and priorities, inter alia, through capacity building and environmentally appropriate technologies."	International agreement			58 Small Island Developing States	2014	ongoing			
Kenya	National	Kenya Plastic Action Plan	"3 year plan by the Kenyan Association of Manufacturers including proposed measures and implementation strategy Supports EPR and development of a Producer Responsibility Organisation (PRO)"	Industry initiative	Plastic packaging, non-packaging (buckets, hangers, plastic bags and single use plastics), composites with a plastic component (quota for plastic content to be defined, 50% proposed)	All size plastics	"Kenya Association of Manufacturers Plan developed with Cyclos consultancy in Germany and AHK Services Eastern Africa (consultancy in Kenya) Funded by the Business Advocacy Fund, technical support from the Confederation of Danish Industry"	Nov 2019	on-going	Implementation plan including actions and timeframe/Recognition of need for partnerships with local authorities		
South Africa, France	Multinational	Declaration of the Global Plastics Associations for Solutions on Marine Litter	Agreement of national industry bodies from around the world to address marine plastic litter through public-private partnerships, research, supporting policy, education, improved recycling and recovery and stewardship	International agreement		All size plastics	47 industry associations including Plastics Federation of South Africa, French Association of Plastic Converters, Elipso (France)	2011	on-going		https://www.marinelitterolutions.com/about-us/joint-declaration/	
All WIO countries	Multinational	UNEA resolutions on marine litter	Successive resolutions on tackling plastic and microplastic marine pollution through improved understanding and governance along with a long-term goal to eliminate the discharge of litter and microplastics into the oceans	International agreement	Marine Litter including macro- and microplastics	All size plastics	UN Environment Assembly	2014	on-going		https://www.unep.org/marine-litter	
Reunion Island (France)	National	EU Directive on waste receptacles and waste management in ports	Applies to all vessels stopping at ports in the EU. Aims for waste produced on-board and collected in ports to be brought to land for treatment and recycling	European Regulation	Waste generated on ships and caught in nets	Macroplastics	European Union	2018	on-going	Repeals 1 Directive and amends 2	https://eur-lex.europa.eu/resource.html?uri=cellar:571859f5-fa71-11e7-b8f5-01aa75ed71a1_0002.02/DOC_1&format=PDF	
Somalia	Local	Plastic bag ban	Plastic bag ban by Islamist shehab group in areas under their control	Local Regulation	Plastic bags	Macroplastics	Shehab Islamist group	2018	on-going?		https://www.france24.com/fr/20180705-somalie-sac- plastique-cible-jihadistes-shebab-afrique-ben-laden	
Reunion Island (France)	National	Circular Economy Action Plan	Measures to reduce use and unintentional release, and to increase capture of microplastics	National strategy	Plastics in packaging, construction materials, vehicles, microplastics; bio-based, biodegradable and compostable plastics	All size plastics	European Union	2019	on-going			

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Réunion Island (France)	National	Directive on Single Use Plastics and fishing gear	Ban of single-use plastics, measures to reduce consumption of plastic food and beverage containers, ERG schemes to clean up litter including fishing gear, targets for collection and recycled content of plastic bottles	European Regulation	Single use plastics and fishing gear	Macroplastics	European Union	2023			https://ec.europa.eu/environment/marine/good-environmental-status/descriptor-10/index_en.htm	
Mozambique	Multinational	Maputo Declaration / African Platform for Clean Cities	"Japan's Minister of the Environment visited Mozambique in the context of closer sectoral cooperation relations and the launch of the Platform that aims at building synergies between African cities in order to promote better solid waste management, greater articulation with central governments, promote citizenship and mobilise society for the importance of cleanliness, as well as contributing to the achievement of the Sustainable Development Goals. Through the Maputo Declaration, the participants made a commitment to make this Platform a mechanism for sharing experience, technology and knowledge in order to contribute to the creation of a waste management system that puts Africa as a reference. They also assume and recognise the importance of a society of recyclable materials and a circular economy, including the 3Rs - Reduce, Reuse and Recycle approach."	International agreement	All types of waste	All size plastics	"MITADER (Ministry of Land, Environment and Rural Development), MOE (Ministry of Environment of Japan), Maputo City Council, JICA (Japan International Cooperation Agency), UNEP (United Nations Environment Programme) and UN-HABITAT (United Nations Programme for Human Settlements) + 25 African countries, whose delegates represent Municipalities and Senior Management of Ministries dealing with the Environment portfolio."	2017	ongoing	"The effort and progress that Mozambique has made with the 3R approach has been acknowledged, which has motivated Japan to reiterate its support to Mozambique in this area, in terms of staff training, infrastructure and reinforcement of the legal framework, as well as in energy production from solid waste processing. The partnership between Japan and Mozambique is ongoing for now 40 years."	http://www.mitader.info/ministro-do-estado-do-ambiente-do-japo-visitou-mozambique-no-ambito-do-estabelecimento-das-relacoes-de-cooperacao-setoriais-e-lancamento-da-plataforma-africana-de-cidades-limpas/	
Mozambique	National	National Marine Litter Analysis in Mozambique	"As part of the ambitious Mozambique ProBlue (MoZaBu) Programme, Pillar 2, the National Marine Litter Analysis in Mozambique seeks to respond to the environmental challenge by first improving understanding of the marine litter problem in the country. The specific objectives of the assignment are to develop a baseline of the production, input and disposal stages of the marine litter and to identify priority areas for intervention. The analysis will cover the entire life cycle and circular economy of marine litter. It will document the distribution of marine litter in the ocean, on the coast, and in the nearshore environment, and identify priority areas where marine litter has the largest impact on Mozambique's coastal and marine environment. The study will also carry out a consumer behaviour analysis on marine litter, which will assist in the analysis of existing gaps in Mozambique's regulatory, policy and institutional framework. This key component of the study will cover existing Mozambican regulations, policies and standards relevant to the entire life cycle of plastics including from the upstream processes to downstream, post-use processes. It will provide insights into the existing national and sub-national regulatory framework and inform government strategies and the potential for institutional capacity building as related to marine litter management. Analysis and recommendations from the project will support the Government of Mozambique in the development of the country's blue economy, including key contributions to the upcoming action plan, which will provide a road map for action in the marine sector."	Litter	All marine waste (including plastics)	All size plastics	"World Bank, Mozambique and Kenya governments Cardno is delivering a parallel marine litter study in Kenya with the Resources and Waste Advisory Group (RWA), a consulting company specialised in waste management, and has renewed its partnership with RWA for the Mozambique marine litter assessment."	2020	ongoing		https://www.cardno.com/projects/national-marine-litter-analysis-in-mozambique/	"David Serra - Cardno https://www.cardno.com/contact-us/?projectId=23309 "
Mozambique	National	National action plan to combat marine litter	"A national action plan to combat marine litter is in preparation through Ministry of Sea, Inland Waters and Fisheries (MMAIF) which entails highlighting priority reform areas for policymakers in relation to marine litter. The objectives of this Plan are to prevent and reduce marine debris pollution and its impact in Mozambique; to remove debris from the marine environment; to increase knowledge and awareness about marine debris; and to develop management approaches to marine debris."	Litter	All marine waste (including plastics)	All size plastics	"Ministry of Sea, Inland Waters and Fisheries (MMAIF) World Bank"	Under development		The elaboration of the Plan is in progress and will receive contributions from MoZaBu activities.		
Comoros, France, Madagascar, Mauritius and Seychelles	Multinational	Regional Action Plan for the Blue Economy	One of the four initiatives proposed is "Coasts and Oceans without plastic pollution". Aims to promote principles and good practice around the circular economy and ensure positive synergies between the different initiatives of the IOC and its member states against marine plastic pollution	Action Plan	Marine pollution	All types of waste	IOC and CEA (United Nations Economic Commission for Africa)	2019	ongoing	Not yet finalised	http://mapecology.ma/actualites/co-cest-travailler-ensemble-a-lelaboration-dun-plan-daction-regionale-economie-bleue/	
Seychelles	National	Blue Economy Roadmap	"Strategy is an integrated approach to ocean based sustainable development, consisted with Sustainable Development Goals, Aichi Target 11 and the Paris Climate Agreement. Strategic Priority 3 - Securing healthy and productive oceans includes "Protecting marine and coastal assets through... Addressing ocean risks (eg marine pollution)"	Strategic Plan	Marine pollution	All types of waste	Government of Seychelles (Blue Economy Department - Office of the Vice President)	2018	2030	2 implementation modalities: establishment governance arrangements and development of a monitoring and evaluation framework		
Comoros, France, Madagascar, Mauritius and Seychelles	Multinational	Action Plan for the Reduction and Management of Waste in the Countries of the IOC	3 priority axes: creation of a waste monitoring agency, accompanying countries to improve their regulatory and institutional framework, developing research, education and innovation regarding reduction and recovery of plastic waste in the ocean, includes a provisional timeline and budget	Action Plan	Marine pollution	All types of waste	IOC	2019	2024	Follow-on from a regional diagnostic study conducted in 2014. Team created to coordinate the programme		

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Somalia	Multinational	Jeddah Convention	"Convention for the conservation of the Red Sea and Gulf of Aden. In 2005 the Protocol concerning the Protection of the Marine Environment from Land Based Activities was published. Article 7 - Management of Solid Wastes requires contracting parties to commit to: 1- taking action to eliminate solid wastes and litter reaching the marine and coastal environment by prevention and improved waste management (collection, recycling and disposal) 2- cooperating and exchanging information on relevant practices and experiences (re: solid waste management, recycling, reuse and cleaner production processes) Other relevant provisions: Article 10 - national legislation and regional guidelines for waste disposal, Article 11 - licencing and waste disposal regulations"	International agreement	All wastes	All size plastics	7 countries in the Red Sea and Gulf of Aden Region: Djibouti, Egypt, Jordan, Saudi Arabia, Somalia, Sudan and Yemen	1982	on-going	Developed through the Programme for the Environment of the Red Sea and Gulf of Aden (PERGA) initiated in 1974, 3 additional protocols formulated in 2005 including on land-based activities	http://sem.perga.org/page-jeddah-convention.php	
Reunion Island (France)	National	Zero Plastic Waste in the Ocean Action Plan	35 measures to end leakage of waste, particularly plastics, to the sea by 2025. Arranged into 4 themes: 1) prevention of plastic pollution on land, 2) combating waste in waterways, wastewater and stormwater, 3) combating plastic waste on coastlines and in the sea, 4) awareness raising, information and education	Action Plan	Marine Plastic Litter	All size plastics	Government of France	2020	on-going	Result of commitments made by interministerial committees of the sea in 2018 and 2019		
Reunion Island (France)	National	EPR scheme for household packaging	EPR scheme covering all household packaging sold in France. Requires to put in place a collection and recovery system, or adhere to a collective system; implement actions on eco-design; and inform consumers on correct sorting of the packaging	National Regulation	Household packaging	Macroplastics	Government of France	1992	on-going		https://www.ademe.fr/sites/default/files/assets/documents/infographie_emballages_menagers_chiffres2018_010941.pdf	
Reunion Island (France)	National	Further EPR schemes for commercial packaging: toys, sports and leisure items, DIY and garden items, fishing gear containing plastic	Addition of new EPR schemes to cover different waste streams, some of which contain plastic. Adopted as part of the anti-waste and circular economy law of 2020	National Regulation	Commercial packaging, toys, sports and leisure items, DIY and garden items, fishing gear containing plastic	Macroplastics	Government of France	2021-2025			https://www.ecologie.gouv.fr/cadre-general-des-filiers-responsabilite-elarge-des-producteurs	
Reunion Island (France)	Local	Regional Waste Prevention and Management Plan	Plan in development since 2018 but not yet published. Proposed to contain: review, 6 and 12 year projections, objective and indicators for prevention, recycling and recovery, regional action plan and actions for waste prevention and management	Strategic Plan	??	??	Department of Reunion			Result of the NOTRe law 2015 giving new capabilities to the regions		
South Africa	National	National Waste Management Strategy	Strategy for improved waste management including 8 priority goals, indicators and Action Plan	Strategic Plan	All wastes	All size plastics	Government of South Africa	2011	2020	Requirement of the Waste Act 2008		
South Africa	National	National Waste Management Strategy	"Update to the 2011 strategy: 3 pillars: Waste minimisation: Effective and sustainable waste services; Compliance, enforcement and awareness. Includes implementation plan Pillar 1 strategic thrust is to "minimise the impact of waste and especially plastic packaging in our coasts, rivers, wetlands and our human settlement environments, by amongst others, diverting waste away from landfill" Also states that the strategy outlines a "strategic approach to reduce littering and illegal dumping, and to reducing the production of SUPs such as foam wrappers, disposable cups and straws that are currently destroying our marine habitats"	Strategic Plan	All wastes	All size plastics	Government of South Africa	2020	on-going	Update to 2011 strategy	https://www.gov.za/sites/default/files/gcis_document/202101/44116govr56.pdf	
South Africa	National	Waste Road Map	Programme to assist government and industry to maximise diversion of waste from landfill. Three key pillars: Human Capital Development, Research and Development, and Innovation	Strategic Plan	5 priority waste streams: MSW, WEEE, plastic, organic waste, tyres	Macroplastics	Department of Science and Technology	2015	2025		https://wasteroadmap.co.za/wp-content/uploads/2020/09/waste_rd_roadmap_ar_2019_20.pdf	
Reunion Island (France)	Multinational	G7 Action Plan to Combat Marine Litter	Contains priority actions on: addressing land-based and sea-based sources; removal actions; and education, awareness and outreach	Action Plan	Marine Litter	All size plastics	G7 countries: France, Germany, Italy, Japan, UK, USA and Canada	2015	on-going			
Reunion Island (France), Kenya	Multinational	G7 Ocean Plastics Charter	Commitments in 5 key areas: Sustainable design, production and after-use markets; Collection, management and other systems and infrastructure; Sustainable lifestyle and education; Research, innovation and new technologies; Coastal and shoreline action	International agreement	Marine plastic	All size plastics	"Canada, France, Germany, Italy, UK and EU Also signed by Kenya and numerous business groups in Kenya"	2018	on-going	Outcome of the G7 Summit in June 2018	https://plasticactioncentre.ca/directory/ocean-plastics-charter/	
Mauritius	National	EPR scheme for PET bottles		EPR	PET bottles	Macroplastics	Government of Mauritius	October 2021				Interview
Mauritius	National	Ban on PET bottles with capacity <1L		National regulation	PET bottles	Macroplastics	Government of Mauritius	January 2022				Interview

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Madagascar	National	Strategy and action plan on marine and plastic waste	Strategy and action plan built around 3 lines: governance, actions, capacities reinforcement. The objective is 1) to increase knowledge in the quantities of waste and 2) develop partnerships for action. The plan deals with all stages of waste management, from eco-design to waste treatment. The text is still in a draft version and should be finalized this year (2021)	Strategic Plan and Action Plan	Plastic waste, Marine plastic	Macroplastics	Government of Madagascar	2021 (under development)			Interview	
All WIO countries	Multinational	Western Indian Ocean Regional Action Plan on Marine Litter	*Targets litter from both land- and sea-based sources. 4 broad objectives: <ul style="list-style-type: none"> - guidance on prevention and reduction including upstream interventions - monitoring of marine litter and microplastics - guiding management of marine litter - advocate removal of existing marine litter* 	Action Plan	Marine Litter and Microplastics	All size plastics	UNEP, Nairobi Convention, Institute of Marine Sciences	2018		Developed in response to UNEA resolutions to address marine litter	https://digital.gomarinlitter.org/action_plan/199	
Comoros, France, Madagascar, Mauritius and Seychelles	Multinational	Implementing Sustainable Law and Non-Chemical Development in SIDS (ISLANDS)	*Regional project to develop coherent standards for chemicals and single use plastics and enforce through simultaneous training of customs organisations. 4 Components: <ol style="list-style-type: none"> 1) Preventing future build up entering SIDS - Activities include regional and national legal frameworks for improved management (including single-use plastics), and training to improve border controls 2) Safe management and disposal - Activities include development and implementation of a regional action plan to combat the generation of marine litter 3) Promote a Circular Economy Approach - Activities include development of private sector partnerships on regional recycling (including for plastics) 4) Knowledge Management and Communications - Activities include sharing knowledge on best practice and technologies related to waste management for SIDS* 	International Programme	Chemicals and marine plastics	Macroplastics	*Countries: 27 SIDS Organisations: GEF, IB, UNDP, UNEP, FAO*	2019	2024		https://digital.gomarinlitter.org/financing_resource/17 https://sids.unep.org/projectdatabases/01728/project_general_info/	
Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, South Africa, Tanzania	Multinational	The GEF Small Grants Programme: International Waters Focus Area	Grants of up to \$50,000 available to local communities, community based organisations and other NGOs for activities including land-based pollution prevention and reduction.	International Programme	Land-based pollution	All types of waste	GEF, UNDP	1992	on-going		https://digital.gomarinlitter.org/financing_resource/18	
All WIO countries	Multinational	Small Grant Programme on Plastic Waste	*Funding for projects aiming to improve the management of plastic waste and thus contribute towards preventing and significantly reducing marine pollution. Projects can be at a municipal, national or regional level, must fall under one or several of four results areas: <ol style="list-style-type: none"> 1) Controlling the transboundary movements (TBM) of plastic waste; 2) Improving the environmentally sound management (ESM) of plastic waste; 3) Preventing and minimizing the generation of plastic waste; 4) Reducing the risk from hazardous constituents such as persistent organic pollutants in plastic waste.* 	International Programme	Plastic waste	All size plastics	*Funded by Norad (Norwegian Agency for Development Cooperation) Projects selected by Steering Committee, channelled through regional centres*	2020	on-going	Implementation of the Basel and Stockholm Conventions		
Kenya, Mozambique, Mauritius, Seychelles, Tanzania, South Africa	Multinational	Commonwealth Clean Ocean Alliance Technical Assistance Facility	*Tailored technical assistance for CCOA countries to help them meet political commitments to: <ol style="list-style-type: none"> i. Take steps to eliminate all avoidable single-use plastic waste; ii. Significantly reduce single-use plastic carrier bags by 2021; iii. Ban the sale and manufacture of microbeads in rinse-off cosmetic and personal care products by 2021.* 	International Programme	Plastic bags, Single-use plastics, Microbeads	All size plastics	Commonwealth Clean Ocean Alliance	2019	on-going		https://digital.gomarinlitter.org/financing_resource/34	
Seychelles	National	Container deposit system	No national legislation but a Memorandum of Understanding between government and beverage producers for PET bottles, aluminium cans and glass bottles. Users pay 70c per bottle and can redeem 50c at one of 6 Redemption Centres. 20c per bottle plus fee from from unreturned bottles, managed by Waste Management Trust Fund	EPR	PET bottles	Macroplastics	Government of Seychelles, Beverage producers, breweries and importers	2007	on-going		https://www.bottlebill.org/index.php/current-and-proposed-laws/worldwide/palau-2	
Mauritius	National	Ban on plastic banners	Environmental Protection (Banning of Plastic Banners) Regulations 2008. Punishments of a fine or imprisonment	National regulation	Plastic banners	Macroplastics	Government of Mauritius	2008	on-going			
Tanzania	Local	Zanzibar Environmental Policy	*Recognises current environmental pressures including "environmental pollution aggravated by inadequate management of solid waste and wastewater". Objectives to "prevent and control pollution and degradation of terrestrial, air, marine and other aquatic environments"; "improve environmental governance for effective environmental enforcement and compliance"; "promote best practices of waste management handling and disposal techniques" for the tourism industry. "In collaboration with private sectors and other stakeholders improve waste management practices at all levels"	Local Policy	All wastes	All types of waste	Government of the United Republic of Tanzania	2013	on-going	Update of 1992 National Environmental Policy for Zanzibar		
Kenya, Mauritius, Somalia, Seychelles, South Africa, Tanzania	Multinational	Global Partnership on Marine Litter	Multi-stakeholder partnership established following the Manila Declaration to facilitate sharing knowledge and experience and work towards SDG 14.1 on marine pollution.	Global Programme	Marine Litter	All types of waste	*UNEP 347 members (bodies and institutions, NGOs, businesses) including WOMSEA*	2012	on-going	Launched at UN conference on Sustainable Development in response to a request in the Manila Declaration.		

Location		Description of the policy/regulation						Stakeholder	Dates			Sources	
Location	Scope of Intervention	Summary	Description	Action type	Waste targeted	Marine Plastic waste type	Organization(s) involved	Year (start)	Year (end)	Comments on the implementation	Sources	Contacts	
Somalia	Multinational	Regional Action Plan for the Sustainable Management of Marine Litter in the Red Sea and Gulf of Aden	60 prioritised actions on 7 complementary components: Integrated Management Framework, Awareness and Education, Legal and Institutional Framework, Encouraging Public-private Partnerships, Removing Marine Litter, Research and Monitoring, Capacity Building and Training. For each action, Lead agency/country, Expected results, Timeframe and Performance Indicators are identified.	Action Plan	Marine Litter	All types of waste	PERSCA (Djibouti, Egypt, Jordan, Saudi Arabia, Somalia, Sudan and Yemen), GPA, UN	2018	on-going				
Comoros	Local	Plastic bag ban	Ban on using plastic bags	Local Regulation	Plastic bags	Macroplastics	Governorate of Anjouan	2008	on-going		Interview + IOC 2018 report		
Comoros	Local	Plastic bag ban	Ban on using plastic bags	Local Regulation	Plastic bags	Macroplastics	Commune of Mutsumudu	2010	on-going		Interview + IOC 2018 report		
Tanzania	Local	Plastic bag ban	Ban on use, import and distribution of plastic bags <30µm on Zanzibar.	Local Regulation	Plastic bags	Macroplastics	Government of the United Republic of Tanzania	2006	on-going				
Tanzania	National	Plastic bag ban	Environmental Management Act: Ban on manufacture, importation and use of plastic sachets for packaging distilled and other alcoholic beverages	National Regulation	Plastic bags	Macroplastics	Government of the United Republic of Tanzania	2017	on-going		regulations		
Mauritius	National	Strategic Waste Management Strategy	*To work towards aim of 40% waste recycled by 2015, identified 4 strategic areas with relevant actions: 1) Improvements in waste collection 2) Increased resource recovery 3) Provison of adequate disposal infrastructure for the short to medium term and selection of appropriate treatment technologies for the long term 4) Wider community involvement 5) Improvement of hazardous waste management"	Strategic Plan	All wastes	All types of waste	Government of Mauritius	2011	2015		https://www.un-page.org/files/public/final_report_industrial_waste_assessment_opportunities_for_industrial_symbiosis.pdf		
Comoros	National	Plastic bag ban	Law No 17-011 prohibiting the manufacture, import, sale and distribution of non-biodegradable plastic bags and packaging, includes financial penalties	National Regulation	Plastic bags and packaging	Macroplastics	Government of Comoros	2017	on-going				

PART II – Database of actions

Description of the Action						Actor		Dates		Location				Finances and partnerships				Sources	
Name of Action	Description	Action type	Waste targeted	Source	Marine Plastic waste type	Organization(s) involved	Organization type	Year (start)	Year (end)	Location	Country	Scope of intervention	Targeted environment type	Financial partners	Funding description and financial information	Existing Partnerships?	Description of the partnerships	Sources	Contacts
Ecopost	WM company and social enterprise that recycles plastic waste to manufacture into Eco-friendly plastic lumber. Micro-franchised agents collect plastic from household waste	Recycling	Plastics	Household waste	Macroplastics	Ecopost	Private Sector	2009	ongoing	Nairobi	Kenya	Local	Cities and towns	DFES impact fund, CoastCali, Bluehaven initiative, Bank of Africa, BID network, KCB bank, Ocean Exchange, Safaricom foundation, SEED initiative, WWF		Yes	Partnerships with local cooperatives, researchers, local NGOs and businesses	Ecopost's website, the report "MARINE PLASTIC LITTER ON SMALL ISLAND DEVELOPING STATES (SIDS): IMPACTS AND MEASURES" and the article from AIR 21 "KENYA - Ecopost fabrique du matériau de construction grâce aux déchets plastiques"	info@ecopost.co.ke
Ocean Sole Africa	Social enterprise that upcycles washed up flip-flops found along the beaches and waterways in Kenya into art and mattresses.	Upcycling	Plastic flip-flops	Litter	Macroplastics	Ocean Sole	Private Sector	2015	ongoing	Kenya	Kenya	National	Coastline	no	N/A	Yes	Partnerships with associations that collect the flip-flops (ex - Watamu Marine Association)	Website and in the report "ETUDE DE LA GESTION DES DECHETS PLASTIQUES DANS LA ZONE CÔTE"	solemates@oceansoleafrica.com
Takatika Solutions	"Waste collection and recycling company. General waste is sorted; organic fraction is composted and plastics are recycled into fleece jackets"	Collection; Recycling	Plastics	Household and commercial waste	Macroplastics	Takatika Solutions	Private Sector	2011	ongoing	Nairobi	Kenya	Local	Cities and towns	no	N/A	No		https://takatikasolutions.com/recycling/	
COREC (Continental Renewable Energy Co)	Company that recycles waste plastic into building materials. Material collected through community youth groups	Recycling	Plastics	Household and/or commercial waste?	Macroplastics	COREC	Private Sector	2013	ongoing	Nairobi	Kenya	Local	Cities and towns	??		Yes	Partnerships with community youth groups to collect post-consumer waste plastic. Partners (not specified if financial or organizational): Ecological Visual Landscapes, Growth-Africa Consulting, Intelicap Impact Investment Network, Village Capital, World Vision"	Website and present in the report "MARINE PLASTIC LITTER ON SMALL ISLAND DEVELOPING STATES (SIDS): IMPACTS AND MEASURES"	info@corec.co.ke
SafHFO	Company transforming plastic waste into fuel	Plastic to energy or fuel	Plastic waste (HDPE, LDPE, PP, PS) and waste tyres	Household and commercial waste	Macroplastics	Adarsh Polymer	Private Sector	2017	ongoing	Nairobi	Kenya	Local	Cities and towns	??		Yes	Partnership with the Kenya Climate Innovation Centre from 2019. Partner with community based organizations to link to dump sites and industry to source plastic waste. Partners: Lato milk, Kenya Association of Manufacturers, Takatika solutions, Centre for Science and Technology Innovations, Unilever, UN Habitat, Farmer's Choice, Kilimani Project Foundation"	https://uburico.com/solutions/safhfo-17gh/ http://www.adarshpolymer.co.ke/	Dan Ndenga - Director, Patrick Wateme - Co-founder & Director

Description of the Action						Actor		Dates		Location			Finances and partnerships				Sources		
Name of Action	Description	Action type	Waste targeted	Source	Marine Plastic waste type	Organization(s) involved	Organization type	Year (start)	Year (end)	Location	Country	Scope of intervention	Targeted environment type	Financial partners	Funding description and financial information	Existing Partnerships?	Description of the partnerships	Sources	Contacts
Plasteco	Recover plastic bags from landfills, they are recycled into building material (bricks, plant pots, etc.)	Recycling	Plastics bags	Landfill	Macroplastics	Madacompost	Private Sector	2011	on-going	Mahajanga, the landfill of Mangakolana	Madagascar	Local	Landfill	AFD, Fonds Français pour l'environnement mondial, Ministère français de l'Agriculture et l'environnement (FNE), Fondation Suez (6N), selling carbon credits, compost and other valorisation products (67N)		Yes	Partnerships with GRIMALOR, Good Planet FOUNDATION and Et-Terra	Website and present in the report https://www.milidae.org/actions/ https://www.milidae.org/actions/ afri-compost: valorisation des déchets organiques-municipaux en compost pour améliorer la gestion des déchets en développement agricole-rurale péri-urbaine dans 5 villes d'Afrique	
Pack-ching project	Collection and recycling of source separated recyclables in exchange for money	Recycling	Recyclables, including plastics	Household waste	Macroplastics	African Marine Waste Network, Palyca, Sael and Shoprite	NPO - Private Sector	2017	on-going	Thabazimbi, Johannesburg, Newcastle, East London, Cape Town	South Africa	Local	Cities and towns	Sael and Shoprite	N/A	Yes	Partnerships with the communities members that bring their sorted recyclables.	Pack-ching's website and present in the main projects of the African Marine Waste Network	* info@packching.co.za
Recycle Swap Shop	Children collect recyclable material in their community and exchange or "swap it for points" at the Recycle Swap Shop collection yard. Using the points, the children can buy items from the shop and also receive a "free" snack.	Recycling	Plastics	Litter - Street picking?	Macroplastics	The Recycle Swap Shop	NPO	2003	??	Hermanos (coastal town) and other towns	South Africa	National	Cities and towns	no	N/A	Yes	Partnerships with local schools	Report "Marine Litter - Socioeconomic study" and their website	marlyh@hermanus.co.za
Repurpose Schoolbags	Collects plastic bags from landfills and participating schools, and recycles them into textiles which are then used to make the schoolbags.	Upcycling	Plastics bags	Household waste - Landfill	Macroplastics	Rethaka Ltd	Private Sector	2011	on-going?	Mogwase	South Africa	Multinational	Cities and towns - Landfill	"Initial funding from 3rd place prize money Schools buying bags are sponsored by Unilever, Coca-Cola, Redbull"	"Received £17000 from the SAB Foundation Social Innovation Awards. Bags sold for 25000 to "Giving partners" - corporations who help sponsor needy schools with children who lack basic school supplies and walk long distances to school"	Yes		Report "Marine Litter - Socioeconomic study" https://saeofthefuture.org/project/rethaka-repurpose-schoolbags%E2%80%8B/ https://the-inkline.com/2017/05/04/repurpose-schoolbags-the-cycled-companion-for-african-schoolkids/	
Krik for Shore	Turns litter collected from beaches in South Africa into beach cricket sets for local communities.	Upcycling	Plastics and bottle tops	Litter	Macroplastics	Kommetjie Environmental Awareness Group, The Harlequin Foundation, EnviroServ	Private Sector (community group) Foundation	??	??	South Africa	South Africa	National	Coastline	EnviroServ (major waste management company in SA)	N/A	Yes	KiNG is managing the waste collection for the Krik sets and has partnered with The Harlequin Foundation who has an existing craft skills development project to make the bags.	Report "Marine Litter - Socioeconomic study" https://www.brandsofthefuture.com/play-your-part-category/play-your-part-repurpose-craft-skills-development-project-to-make-the-bags-creates-jobs/	
Gjerge Makers	Transforms plastic waste into sustainable building materials. These include paving stones, paving slabs and manhole covers.	Recycling	Plastics	Household and/or commercial waste?	Macroplastics	Gjerge Makers	Private Sector	2018	on-going	Nairobi	Kenya	Local	Cities and towns	??		Yes	Kenya Climate Innovation Centre, Make IT in Africa, Watson, Alquity, Strathmore University, Panga	Website and Article "Nairobi Make revealed for the plastic waste recycling project" on Afrik 21	info@gjerge.co.ke
DMDP waste to value project	Job creation in plastic collection, sorting and processing and connection to plastic recycling expertise	Collection/Recycling	Plastics	Litter - Landfill	Macroplastics	WWF, Vendersnaturforuden and PETCO Kenya	NPO - Private Sector	2020	2024	Coastal counties of Kenya (Kwale, Mombasa, Kilifi, Lamu)	Kenya	Local	Coastline - Cities and Towns - Landfill	Plastix A/S	Received funding of \$55,000	Yes	Partnership between private sector (Jl Plastics, Kwale Plastics Plus Collectors, Mt. Green Africa Limited & PETCO Kenya) and WWF	https://ndsp.dfo.org/en/waste-to-value-tapping-the-market-for-recycle-plastic-in-kenya/ https://www.wfwafrica.org/en/waste-to-value/	

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Description of the Action						Actor		Dates		Location				Finances and partnerships				Sources	
Name of Action	Description	Action type	Waste targeted	Source	Marine Plastic waste type	Organization(s) involved	Organization type	Year (start)	Year (end)	Location	Country	Scope of intervention	Targeted environment type	Financial partners	Funding description and financial information	Existing Partnerships?	Description of the partnerships	Sources	Contacts
U-turn waste management project	Plastic packaging made from 100% recycled flexible materials	Recycling	Plastics	Household and commercial Waste	Macroplastics	Unilever / Green Africa Trading (waste collection company)	Private Sector	2020	on going	Kenya - East Africa	Kenya	National	All types of environment	no	N/A	Yes	Developed in collaboration with waste management service provider Green Africa Trading.	Article "Unilever introduces 100% recyclable plastic packaging in East Africa" on Afrik 21	
Zero Waste to Landfill	Product wrapper waste from the manufacturing plant is shredded and used in recycled boards	Recycling	Pre-consumer manufacturing waste	Commercial waste	Macroplastics	Unilever	Private Sector	??	??	Nairobi	Kenya	Local	Cities and towns	no	N/A	No		https://www.unilever.co.ke/news/press-releases/2018/unilever-achieves-zero-waste-to-landfill-across-global-factory-network.html?newsid=rcm:1283-65664-4	
Eco-Warriors Comic Book	A Comic Book for kids in exchange for collection and sorting of 5kg of household waste	Recycling - Awareness-raising - Education - Litter Collection	Plastics, paper and MSW	Household waste	Macroplastics	Eco-Warriors	Private Sector	2019	on going	Port Louis	Mauritius	Local	Cities and towns	France - Mauritius International Chamber of Commerce (CCI/M) and Quality Beverages Ltd.	N/A	Yes	"Rogers, Mauritius Commercial Bank, Region Réunion, UNESCO, SEDEC, Quality Beverages Local Primary Schools"	Website	info@panda-wolf.com
Litter4Tokens's recycling campaign	Community members collect recyclable material in exchange for tokens to buy food and clothing	Recycling	PET, HDPE, LDPE and PP	Litter - Household waste	Macroplastics	Litter4Tokens, PETCO	NPO	2015	on going	KwaZulu Natal and Mpumalanga	South Africa	Local	Cities and towns			Yes	Partners with PETCO, Institute of Waste Management South Africa, Dolphin Waste Management Coast, TURBAG	Website of the Litter4Tokens	clare@litter4tokens.co.za
Litter4Tokens's recycling campaign	Students collect recyclable material, funds used to purchase stock for the token shops	Collection	PET, HDPE, LDPE and PP	Litter - Household waste	Macroplastics	Litter4Tokens, PETCO	NPO	2017	on going	KwaZulu Natal (6 schools) and Mpumalanga (3 schools)	South Africa	Local	Cities and towns	PETCO	PETCO provide bags for recyclables and a water filter for each school		Partners with PETCO and local schools, Institute of Waste Management South Africa, Dolphin Waste Management Coast, TURBAG	Website of the Litter4Tokens	clare@litter4tokens.co.za
Mermaid Tear Catcher	Fishnets made from ocean bound plastic	Recycling	Ocean bound plastic	Litter	Macroplastics	Litter4Tokens	NPO	2019	on going	South Africa	South Africa	Multinational	Coastline	??		Yes	"World Nurdle Association Partners and sponsors: Sea Hugger, Petco, Dolphin Coast waste management, Institute of WM of Southern Africa, Aubag, O la la interior, the Stretch Foundation, Complycity"	https://www.litter4tokens.co.za/products/mermaids-tear-catcher	
Aldabra raft race	Aldabra is one of Seychelles' most precious wildlife hotspots. Marine plastic litter inundates Aldabra's extensive shorelines, polluting the sand and water and posing a hazard to wildlife. The event promises to see some innovative raft designs made of recycled plastic	Upcycling - Awareness-raising	Plastics	Household waste	Macroplastics	The Seychelles National Parks Authority (SNPA) and Global Vision International	Local government - Private Sector	2018	on going?	Aldabra	Seychelles	Local	Coastline - Rivers	no	N/A	Yes	Partners with the Seychelles Ocean Festival organised by Seychelles Tourism Board (held during the Seychelles Festival)	"Raft race 2019 promotes recycling opportunity for Aldabra plastics" published in the newspaper Seychelles Nation	
All women recycling	Upcycling plastic bottles into gift boxes	Upcycling	Plastic bottles	Litter - Household waste	Macroplastics	All Women Recycling	Private Sector	2008	on going	Cape Town	South Africa	Local	Cities and towns	??		Yes	"Partnerships with plastic packaging companies: Polyopak Packaging, Avertch, Damsipet, Polyjet"	https://www.allwomenrecycling.com/our-story	
Dadaab recycling project	Refugees at the Dadaab refugee camp collecting and recycling plastics (bottles, buckets, jerry cans)	Collection, Recycling	Plastics	Litter	Macroplastics	Kenya Red Cross Society	NPO	2017	??	Dadaab	Kenya	Local	Cities and towns	??		Yes	Materials sold to recycling companies: Premier Industries, Polytech Plastics Industries	https://www.reuters.com/article/us-environment-day-kenya-refugees-idUSKCN1J101	

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Green Plastic	Recycling plastics (bags, bottles, wrappers) into roof tiles and other products	Recycling	Plastics	Litter	Macroplastics	Green Plastic	Private Sector	2018	??	Mogadishu	Somalia	Local	Cities and towns	??				https://www.routersonline.com/article/10-somalia-plastics-450KCN1PG124	
ECOSOC	Collection of waste and recycling plastic to manufacture eco-friendly plastic building materials: roofing, road paving stone, bricks, outdoor furniture	Collection, Recycling	Plastics	??	Macroplastics	ECOSOC	Private Sector	??	??	Mogadishu	Somalia	Local	??	Let's Do It Foundation, Government of Benadir??				https://ecosoc.so/	
Waste4Good	Organisation to research and develop waste diversion technologies and running the Hammersdale Waste Beneficiation Centre (showcase facility where different waste streams can be recycled)	Recycling	Plastics and other wastes	Household and commercial waste?	Macroplastics	Plastipaid, EnviroTimbers, Green Plastics Design Ecology Plastics	NPO	2014	on-going	eThekweni municipality	South Africa	Local	Cities and towns	Ethekweni Municipality, Ashoka, Trade & Investment KwaZulu-Natal, Green Fund		Yes	Enviro Association of SA, Durban Chamber of Commerce and Industry, DSI (see WMI Dept), Plastics SA, National Recycling Forum, Institute of WMI of Southern Africa	https://www.w4g.co.za/	
De-Recycling	Recycling company	Recycling	Tomato sauce bottles (reused), PET (recycling)	Household and commercial waste	Macroplastics	De Recycling	Private Sector	2008	??	Providence	Seychelles	Local	Cities and towns	??		Yes	"Seychelles Trading Company buys back tomato sauce bottles 9 hotels supplying PET bottles"	http://www.seychellesnewagency.com/articles/2013/seychelles-company-exports-millions-of-shredded-PET-bottles-to-reduce-the-islands-solid-waste	
Hanni Company	Recycling company with a fifteen tonnes per tonne collection. Only exporter of PET from Seychelles	Recycling	PET bottles	??	Macroplastics	Hanni Company	Private Sector	2012	??	Providence	Seychelles	Local	Cities and towns	??			Former employee of Seychelles Brewing now collecting their PET bottles	http://www.seychellesnewagency.com/articles/2013/seychelles-new-agency-opens-up-space-by-recycling-in-seychelles	
Regeneration Africa	Recycling waste plastics into building materials (fence posts, pavers, signage...) and boat parts	Recycling	Plastics	Litter	Macroplastics	Regeneration Africa, the Flipflop	Private Sector	pre 2016	2019	Nairobi	Kenya	Local	Coastline - Cities and towns	??			Flipflop provides waste which is recycled by Regeneration Africa	https://www.theflipflop.com/blog/2016/11/30/20161130regeneration-africa	
The Joinery	Design brand recycling plastic bottles into fabric	Upcycling	PET bottles	??	Macroplastics	The Joinery, PETCO	Private Sector	2016	on-going	Cape Town	South Africa	National	Cities and towns	??		Yes	"Local fibre recyclers helped with creation of fabric from bottles. Collaborated with womens sewing cooperative"	https://thejoinery.co.za/sustainable-products/	
Green Home	Producer of biodegradable food packaging made from plants	Plastic-free eco-design	Plastic food packaging	Avoidance	Macroplastics	Green Home	Private Sector	2007	on-going	Cape Town	South Africa	National	All types of environment	??			"Founding member of the Organic Recycling Association of South Africa Home of the Viva Ekhaya Soup Kitchen"	https://greenhome.co.za/	
EcoPack	Producer of biodegradable and compostable food packaging made from plants	Plastic-free eco-design	Plastic food packaging	Avoidance	Macroplastics	EcoPack	Private Sector	2008	on-going	Cape Town	South Africa	National	All types of environment	??				https://ecopack.co.za/	
Dungbeetle project	Mobile art sculpture containing waste to energy system	Plastic to energy or fuel	All plastics	Household waste - Landfill	Macroplastics	Alliance Earth	NPO	2018	on-going	Johannesburg	South Africa	Local	Cities and towns	Commercial arm: ScaarbTECH (based in Colorado)			Team of collaborators includes NGOs, universities, municipalities, entrepreneurs and scientists	https://ubuntu00.com/solutions/dung-beetle-project/	
Regenize	App encouraging recycling through rewards based virtual currency	Recycling	Recyclables	Household waste	Macroplastics	Regenize	Private Sector	2016	on-going	Cape Town	South Africa	Local?	Cities and towns	??		Yes	PETCO, the Waste Minimisation and Recycling Interest Group	https://ubuntu00.com/solutions/regenize/	

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Munch Bowls	Produces edible wheat bowls to replace plastic	Plastic-free eco-design	Plastic bowls	Avoidance	Macroplastics	Munch Bowls	Private Sector	2014	on going	Cape Town	South Africa	Local	Cities and towns	??		Yes?	5 stockists in Cape Town, Bellville and Franschhoek	https://ubuntoo.com/solutions/munch-bowls-1gh/	
Litterboom project	Barriers across rivers to stop flow of surface plastics which are then collected for recycling	Recycling - Litter collection	Surface plastics in rivers (mostly PET and HDPE)	Litter	Macroplastics	Parley	NPO	2015	on going	Durban and Cape Town	South Africa	Local	Rivers	??		Yes	Partnerships with Tullbag Wildlife, Astore Kymak, Fine Metals, and Cape Bulk Bags	https://ubuntoo.com/solutions/the-litterboom-project-1gh/ https://www.businessinsider.co.za/litterbooms-in-cape-town-2020-6/	
Mr Green Africa	Recycles plastics collected by waste pickers	Recycling	PET, HDPE and PP	Litter	Macroplastics	Mr Green Africa	Private Sector	2014	on going	Nairobi	Kenya	Local	Cities and towns	??		Yes	WWF Kenya, Smolan (international retail solutions company, announced Oct 2020)	https://ubuntoo.com/solutions/mr-green-africa-1gh/ https://www.mrgreenafrica.com/supply-to-us/	
ParCo Plastic Centre	Community organisation processing of litter and ocean plastic	Plastic to energy or fuel - Collection	Beach litter (mostly PET bottles)	Litter	Macroplastics	ParCo	Community group	2018	on going	Bezanip Artchipega National Park	Mozambique	Local	Coastline	??		Yes	*Partnership with ScarabTech to pilot their pyrolysis machine pending funding *Partnership with local artist/activist 'Kico Gaiteta'	https://www.parcomz.com/	
Atlantic Plastic Recycling	Plastics recycler	Recycling	Plastic (LDPE, LDFE & HDPE)	Household and commercial waste	Macroplastics	Atlantic Plastic Recycling	Private Sector	1989	on going	Cape Town	South Africa	National	Cities and towns	??		Yes	*South African Plastic Recycling Organization, Plastics SA, Atlantic Plastic Bags, CropLife International, Green Cape, POLYCO, NewLife Plastics, Primwood Products Suppliers to Tully and Primwood*	http://www.atlanticplasticrecycling.co.za/	
Stasher	Sells silicone bags to replace plastic alternatives	Plastic-free eco-design	Plastic food packaging (particularly sandwich and ziplock bags)	Avoidance	Macroplastics	Stasher	Private Sector	2018	on going	South Africa	South Africa	National	All types of environment	??				https://stasherbag.co.za/	
Tully	Manufacturer of recycled plastic garbage bags	Recycling	LDPE	*Household waste and Landfill (75%); Commercial waste (25%)*	Macroplastics	Bouny Brands	Private Sector	1986	on going	Cape Town	South Africa	National	Cities and towns	??		Yes	Supplied by Atlantic Plastic Recycling	https://www.tully.co.za/environment/	
Primwood	Manufacturer of outdoor furniture and garden structures from recycled plastic	Recycling	Plastic waste	Household and commercial waste	Macroplastics	Primwood	Private Sector	2001	on going	Hermanus	South Africa	Local	Cities and towns	??		Yes	Supplied by Atlantic Plastic Recycling	http://www.primwood.co.za/	
ExtruPET	Plastics recycler	Recycling	PET bottles	Household and commercial waste	Macroplastics	PETCO	Private Sector	2000	on going	Gauteng	South Africa	National	Cities and towns	??				https://petco.co.za/members/extrupet/	
Zero Landfill Project	Buy back and recycling of empty spoons	Recycling	Plastic spoons	Commercial waste	Macroplastics	ACA Threads, Western Cape Industrial Symbiosis Programme	Private Sector	??	??	Brackenell	South Africa	Local	Cities and towns	??		Yes	Spoons cleaned and labels removed by local NGOs	https://www.acathreads.co.za/images/sustainability/ACA%20Recycling.pdf	
Scarabtech	Manufacturer of plastic pyrolysis units	Plastic to energy or fuel	All plastics except PVC	All sources	Macroplastics	Scarabtech	Private Sector	2019	on going	Johannesburg	South Africa	Multinational	All types of environment	??		Yes	*Academic: Oxford University, Bangor University, University of Birmingham *Outreach partners (education and clean-ups): Alliance Earth (Colorado), Dung Beetle Project (SA), ParCo (Mozambique), Field Ready (Fiji)*	https://scarabtech.com/	Jeffrey Barbee - Co-founder & CEO

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Nsheke Straws	Producer of biodegradable straws from local Nsheke grass	Plastic-free ecodesign	Plastic straws	Avoidance	Macroplastics	Afrosolt Limited	Private Sector	??	??	Keshi	Tanzania	Local	All types of environment	??				https://ubuntoo.com/solutions/nsheke-straws	
EcoAct Tanzania	Recycling plastic waste into plastic lumber and school desks	Recycling	All plastics	Household waste - Litter - Landfill	Macroplastics	EcoAct Tanzania	Social Enterprise	2015	on going	Dar-es-Salaam	Tanzania	Local	Cities and towns - Landfill	??				http://www.ecoact.co.tz/	
The Recycler	Plastics recycler	Recycling	Plastic bottles (PET, HDPE) and some smear plastic wrap	Household and commercial waste	Macroplastics	The Recycler	Private Sector	2014	on going	Dar-es-Salaam	Tanzania	Local	Cities and towns	??				https://www.recycler.co.tz/	
Mbezi Recycling	Plastics recycler	Recycling	PET bottles	Household waste	Macroplastics	Mbezi Recycling	Private Sector	2015	on going?	??	Tanzania	Local	Cities and towns	??				https://recyclingz.wordpress.com/	
Zaidi face shield	Making COVID face shields from plastic bottles	Upcycling - Recycling	PET bottles	Commercial waste	Macroplastics	Zaidi Recyclers	Private Sector	2020	on going	Dar-es-Salaam	Tanzania	Local	Cities and towns	??				https://zaidi.co.tz/ https://www.msn.com/en-uk/afrika/other/recycling-plastic-in-tanzania-turns-plastic-bottles-into-face-shields-amid-covid-19/ar-BB15M5r8	
Waste Recycling and Recovery Centre	Recycling centre for waste collected in public collection bins. Material either recycled locally or exported	Collection, Recycling	Recyclables (plastic, glass, metal and paper)	Household waste	Macroplastics	2Mains, Moroni council	NPO	2018	on going	Moroni	Comoros	Local	Cities and towns	European Union, French Embassy of Comores, Japanese Embassy of Madagascar		Yes	Financial support + site provided by Moroni council, part of the Re-Source platform	http://www.2-mains.org/index.php?option=com_content&view=article&id=66&Itemid=115 http://www.2-mains.org/images/PDF/Newsletter4_web.pdf	
2Mains	NGO assisting on waste projects including establishing a waste collection system (waste to landfill)	Collection	MSW	Household waste	Macroplastics	2Mains, Domoni council	NPO	2016	on going	Anjouan	Comoros	Local	Cities and towns	European Union			Part of the Re-Source platform	http://www.2-mains.org/images/PDF/2Mains_Rapport_annuel_2018_web.pdf	
RIPE Mauritius	Creation of a biodegradable cup (containing seeds) to replace plastic	Plastic-free ecodesign	Plastic cups	Avoidance	Macroplastics	Paracore Permaculture Movement	Social Enterprise?	2018	on going?	??	Mauritius	Local	All types of environment	??				https://work-with-nature-et-ripe-ant.com/ripe/	
EcoWorld Recycling and Upcycling facility	Lead beach clean-ups and collection of plastic waste which is then recycled or upcycled into artwork and sculpture for sale	Collection, Recycling, Upcycling	Plastics	Household and Commercial waste (hotels) - Litter	Macroplastics	Watamu Marine Association	NPO	2010	on going	Watamu National Marine Park	Kenya	Local	Coastline - National park	Local hotels IUCN through their MAB/PLASTICCS program*	up to US\$50,000 over 12 months	Yes	Local women and youth groups, hotels	https://swimsuit.si.com/travel/ecoworld-watamu-recycling-si-swimsuit-2019-desinatours	
Ecoparcs	Plastic waste materials collected to prevent leakage into Bazaruto Archipelago National Park	Collection	Plastics	Household and Commercial waste - Litter	Macroplastics	3R Reduzir, Reusar e Reciclar Limitada	NPO	2020	on going	Vilanculos	Mozambique	Local	Cities and towns - National park	IUCN through their MAB/PLASTICCS program	up to US\$50,000 over 12 months	Yes	waste pickers, micro-enterprises, and local residents and organisations	https://www.iucn.org/news/marine-and-golan202002marplasticcs-funds-projects-promoting-circular-economy-africa-and-asia	
BluePort Project	Combining unrecyclable waste collected from the port with sand and glass to create an Ocean Brick	Recycling	All waste (including plastics)	Litter	Macroplastics	Wildlands Conservation Trust (WldTrust)	NPO	2019		Durban Port	South Africa	Local	Rivers	IUCN through their MAB/PLASTICCS program Tansone, Grindrod bank*		Yes	*Transnet - state owned ecosystem of ports, funding peramboms at 4 sites YES (Youth Unemployment Services) - operational team who collect and sort the waste*	https://papermaptrack.org/blue-port-project	
Blue Crew	Local female entrepreneurs collecting waste for recycling	Recycling	All waste (including plastics)	Litter	Macroplastics	Wildlands Conservation Trust (WldTrust)	NPO	??	??	??	South Africa	Local	Coastline	??				https://wldtrust.co.za/wlddocs/	

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Plasticlean	Collection, sorting and compression of plastic waste	Collection, Recycling	Plastic bottles (PET, HDPE lids)	Litter	Macroplastics	Plasticlean	NPO	2019	ongoing	Mahajanga, Nosy Be, Fianarantsoa and Tuléar	Madagascar	Local	Coastline	??	50% of costs covered by sale of material, 50% from external funding	Yes	Local community group to help with collection NGO BEL AVENIR - EAU DE COCO assist with motivation of activity to Tuléar Local group Le Relais at Fianarantsoa	https://www.facebook.com/notes/617802045228994/	
Hotel Princess Bora	Encouraging guests to avoid plastic (proposing no plastic bottles, banquets instead of plastic bags...)	Avoidance	Plastic bags, Plastic bottles, straws	Avoidance	Macroplastics	Hotel Princess Bora	Private Sector	pre 2019	ongoing	Hotel on Sainte Marie island	Madagascar	Local	Cities and towns	??				"DOC GRE 2020 Madagascar" https://www.google.com/maps/@viewer?mid=154kaPaj5GY...o5446G_g68lCedusPhZ&ll=18.870116019999999%2C47.5079054999998&z=8	
ADDEV	Implementation of an informal waste collection system	Collection	Plastic and paper	Commercial waste	Macroplastics	ADDEV Madagascar	NPO	??	??	Andry, Ankondrano, Antsoaviha, Antsiady	Madagascar	Local	Cities and towns	Catholic Fund for Local Initiatives		Yes	Ecologic Made (recycler) and NGO Teach for Madagascar	DOC GRE 2020 Madagascar, Hydrocounsel report	
Pavé Ecologique	Buy plastic from waste pickers at the landfill for recycling into paving	Recycling	Plastic waste	Landfill	Macroplastics	Miharihoa Association	NPO	2012	ongoing	Antananarivo	Madagascar	Local	Landfill	Programme DINA (EU), Tony Meira foundation	support of 60 000 euros + 30 000 000 MGA			Hydrocounsel report	
TARTA	Collection and recycling of waste from households	Collection, Recycling	Plastic waste	Household waste	Macroplastics	TARTA Association	NPO	2016	ongoing	Antananarivo	Madagascar	Local	Cities and towns	EU				Hydrocounsel report + http://www.mahatsincrit.org/les-motivations/management-d-une-station-de-traitement-des-dechets Establishment of a Waste-Processing plant	
Fishing Line Recovery and Recycling Program	Installation of bins made from PVC pipes for the disposal of fishing line, most of which is recycled into bush cutters line	Collection	Fishing line	Litter	Macroplastics	Clean up and recycle South Africa	NPO	2010	ongoing	South Africa	South Africa	National	Coastline	Machell Plastics	Donation of materials to construct bins	Yes	Dyer Island Conservation Trust, conservation groups and various local authorities	" https://www.marinelittersolutions.com/projects/fishing-line-bin-project/ " https://cleanupandrecycle.co.za/fishing-line-bin-project-new-sponsor/	
Kraaifontein MRF	Materials Recovery Facility preparing and baling household waste	Recycling	Plastic waste	Household waste	Macroplastics	City of Cape Town	Local government	2011	ongoing	Cape Town	South Africa	Local	Cities and towns	??				https://www.gafrika.com/wards/kraaifontein-integrated-waste-management-facility/	
Plastic Recycling Youth Organisation (PREYO)	Recycling plastic into paving slabs	Recycling	Plastic waste	Litter	Macroplastics	Plastic Recycling Youth Organisation	Private Sector	2018	ongoing	Dar-es-Salaam	Tanzania	Local	Cities and towns	??				https://www.indephenet.net/index.php/the-world/africa/2817-tanzanian-environmentalists-burning-plastic-into-paving	
Arena Recycling Industry	Making EcoBricks for toilets and water tanks from plastic collected at beaches	Recycling	Plastic waste	Litter	Macroplastics	Arena Recycling Industry	Private Sector	2019	ongoing	Dar-es-Salaam	Tanzania	Local	Coastline	??		Yes	Women in Recycling Foundation	" https://www.facebook.com/youngwatersolutions/videos/burning-plastic-waste-into-toilets-in-the-erdadam-hills-in-pangwae-water-fallow-6542643666526357 " http://arenarecycling.com/	
Performance Plastics	Manufacturer of biodegradable plastic bags (potato or corn-based)	Plastic free eco-design	Plastic bags	Avoidance	Macroplastics	Performance Plastics	Private Sector	2016	ongoing	Mauritius	Mauritius	National	All types of environment	??				https://performance.mu/plastics/biodegradable-bags/	
Green Plastic Designs	Manufacturer of building materials and outdoor furniture from recycled plastic	Recycling	PP waste from PE palletising companies	Commercial waste	Macroplastics	Green Plastic Designs	Private Sector	2006	ongoing	Abertou	South Africa	Local	Landfill	??		Yes	PETCO and Plastic SA to expand operations	https://greenplastic.co.za/Default.asp	
Goodbye Plastic	Physical and online shop selling zero waste items (bamboo straws and brushes, metal water bottles, lunch boxes etc)	Plastic free eco-design	Plastic straws, water bottles, toothbrushes, lunchboxes	Avoidance	Macroplastics	Goodbye Plastics	Private Sector	2018	ongoing	La Réunion, Mayotte and Paris	La Réunion (France)	National	All types of environment	??		Yes	Bamboo straws used by bars and restaurants across Reunion Island and in Mayotte, France and Switzerland	https://goodbyeplastic.fr/	

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BPE (Bourbon Plastics Emballages)	Manufacturer of biodegradable and recyclable plastic bags. (Part of the Cleansweep operation)	Eco design for biodegradability and recycling	Plastic bags	Household and commercial Waste	Macroplastics	BPE (Bourbon Plastics Emballages)	Private Sector	??	on-going	Bras Panon	La Réunion (France)	National	All types of environment	European Union				https://www.bpe.re/	
Bureau Recyclage	Collector of plastic bottles for the private sector, for recycling	Collection	Plastic bottles	Commercial waste	Macroplastics	Bureau Recyclage	Private Sector	2015	on-going?	Piton Saint-Leu	La Réunion (France)	Local	Cities and towns	??		Yes	"Entreprise Adaptée Les TI (biens design and manufacture of collection bins) Currently clients: CBO, CNAM, Expediton, Hotel Akoya, ID logistics Member of Cluster GREEN - association of businesses and public/private organisations that promotes sustainability and circular economy"	https://www.bureaurecyclage.re/	
Precious Plastic	Workshops on how to build and use a plastic recycling machine	Recycling	All plastics	Litter	Macroplastics	Elopratik	NPO	2018	on-going	La Réunion (France)	La Réunion (France)	National	Cities and towns	??		Yes	Partnered with surfrider to collect bottle-tops used in the machine	http://www.elopratik.fr/2018/03/02/recycler-le-plastique-c'est-possible-localement/	
GasyPlast	Manufacturer of biodegradable plastic bags from manioc starch	Plastic-free eco-design	Plastic bags	Avoidance	Macroplastics	GasyPlast	Private Sector	2015	on-going	Andranorona	Madagascar	Multinational	All types of environment	??		??	Looking for local supplier of manioc	https://www.nourishment.me/gasyplast-laffaire-est-dars-le-sac/ http://ecoaustral.com/gasyplast-veut-produre-1-000-tonnes-de-sacs-biodegradables-par/	
Say no to plastic in the waste	In Maputo recycled waste serves to raise the largest mural made of plastic wastes collected from the streets of the Mozambican capital. The space poses a challenge to environmental conservation and calls for increased reuse and recycling of plastics in Mozambique. This is the first mural made from recycled plastic ties in Africa. A space that arouses the curiosity of the bourgeoisie."	Recycling	PET bottles	Litter (Street picking)	Macroplastics	This project has the collaboration of the Municipal Council of Maputo, the environmental organization New Sigma and the National Directorate of Environment	Local government NPO	2019	on-going	Maputo	Mozambique	Local	Coastline - Cities and towns	Municipal Council of Maputo		Yes	Rui Silva is an environmentalist and one of the mentors of the idea of recycling plastics that are used to make ties that are displayed on the mural near the Costa do Sol beach, in the noble area of the capital, Maputo.	https://www.dw.com/fr/002/mozambique-volunt%C3%A9rios-participam-na-cria%C3%A7%C3%A3o-de-uma-obra-de-arte-em-pl%C3%A1stico-que-ajuda-a-limpar-a-cidade/a-50530220	
Pilot project for the development of solid urban waste recycling	Recicla is a plastic production cooperative created in 2009 as part of the pilot project of Hulene district. The company created a project to the treatment and recovery of plastic with positive impacts on the environment, economy, social action and education. RECYCLA buys the plastic, per kilo from the population that collects it in the city.	Collection	"PEHD and PELD: Bottles, cans, boxes, basins PP: Chairs, tables, buckets, household utensils, terraces, covers Plastic bags and film"	Litter	Macroplastics	Recicla	Community group	2006	on-going	Maputo (Hulene B district)	Mozambique	Local	Coastline - Cities and towns					https://www.dw.com/fr/002/maputo-de-livro-pl%C3%A1stico-ajuda-a-limpar-a-cidade/a-50530220	"RECYCLA +258 82 4836000 +258 21456620"
Enrollment Project Build	Past consumer and post-industrial PS is granulated into beads and mixed with cement and additives to form	Recycling	EPS (all colours)	Household and commercial waste	Macroplastics	Polystyrene Association of SA	Private Sector	2020	on-going	??	South Africa	??	Cities and towns					http://www.polystyrene.co.za/index.html	
Beanbag filling	Recycle polystyrene into beads	Recycling	Polystyrene packaging	??	Macroplastics	Beanbag filling	Private Sector	2020	on-going	Pretoria	South Africa	Local	Cities and towns					http://www.beanbagfilling.co.za/	

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Tutudesk	Portable desks made from recycled high-impact PS distributed to school children in sub-Saharan Africa	Recycling	High impact PS (such as rigid containers and plastic eating utensils)	??	Macroplastics	Tutudesk	NPO	2012	ongoing	Gauteng	South Africa	Multinational	Cities and towns	over 40 organisations, businesses and philanthropists from around the world		Yes	"Polystyrene Association of SA Schools to collect plastics"	"https://afham.china.org/afri-ca-partnership-datas.com/tutudesk/https://borgenproject.org/tutudesk-campaign/"	
Bread Tags for Wheelchairs	Bread tags and bottle tops recycled into wheelchairs	Recycling	High impact PS	Household waste	Macroplastics	Bread Tags for Wheelchairs	NPO	2006	ongoing	Cape Town	South Africa	Multinational	Cities and towns			Yes	"Polystyrene Association of SA Winter (seller of wheelchairs), Zico, Interwaste, Waste Plan, My Plus (buy bread tags and lids), Kee Ink (give pamphlets), SA Polystyrene Packaging Council; Patience (collection points and transport), groups, people, churches, schools and companies (collect tags/donate money)"	https://breadtagsforwheelchairs.co.za/	
Project Decor	Recycling polystyrene into curtain rods, picture frames, cornices, mouldings, beads (for crafts), cooking bag	Recycling	High impact and expanded PS	??	Macroplastics	Polystyrene Association of SA	Private Sector	??	ongoing	??	South Africa	??	Cities and towns					http://polystyrenesa.co.za/recycling/	
Comore Plastique	Recycling and manufacture of plastic bags	Recycling	Plastic bags	Household and commercial waste	Macroplastics	Comore Plastique	Private Sector	2015	??	Mutsamudu	Comoros	Local	Cities and towns			Yes	"Machines bought from China. Would like to work with local governments, partnership planned with Mutsumudu. Clients include Sawafix in Moroni"	https://documents.plateforme-re-sources.org/wp-content/uploads/2020/12/MS-Etude-de-recyclage-a-Domoni-Comores-Doux-mains.pdf	
Réparation de coupe coupe	Individual recycling hard plastics into knife handles	Recycling	Plastic chairs	Illegal dumps	Macroplastics	Individual	Private Sector	??	??	Moroni	Comoros	Local	Cities and towns					https://documents.plateforme-re-sources.org/wp-content/uploads/2020/12/MS-Etude-de-recyclage-a-Domoni-Comores-Doux-mains.pdf	
Paniers tressés	Weaving plastic strapping into sturdy, waterproof baskets	Upycling	Plastic strapping	Illegal dumps	Macroplastics	Group of women	Private Sector	??	??	Mutsamudu	Comoros	Local	Cities and towns					https://documents.plateforme-re-sources.org/wp-content/uploads/2020/12/MS-Etude-de-recyclage-a-Domoni-Comores-Doux-mains.pdf	
Machababi ya Leo na Meso	Manufacture of self-locking pavers	Recycling	Plastic bags and PET	??	Macroplastics	Machababi ya Leo na Meso	NPO	??	??	Mutsamudu	Comoros	Local	Cities and towns					https://documents.plateforme-re-sources.org/wp-content/uploads/2020/12/MS-Etude-de-recyclage-a-Domoni-Comores-Doux-mains.pdf	
Ulanga Treatment -recycling	Recycling hard plastics into school supplies (figures, rulers, protractors)	Recycling	Hard plastics	??	Macroplastics	Ulanga Treatment	NPO	??	??	Moroni	Comoros	Local	Cities and towns	Require backing from a partner such as Unicef		Yes	Suss NGO Terres et Faunes	https://documents.plateforme-re-sources.org/wp-content/uploads/2020/12/MS-Etude-de-recyclage-a-Domoni-Comores-Doux-mains.pdf	
Ulanga Treatment -treatment	Trial of a gas-fired distillation oven powered by burning plastic bags	Plastic to energy or fuel	Plastic bags	??	Macroplastics	Ulanga Treatment	NPO	2015	??	??	Comoros	Local	Cities and towns			Yes	"Suss NGO Terres et Faunes. Potential application in Bourkha Mang project"		
Banda Bits	Local organisation collecting waste and upcycling into furniture, decoration and useful items	Collection, Upcycling	All waste (plastic, paper, tyres, organics)	Litter	Macroplastics	Banda Bits	NPO	2012	ongoing	Moroni	Comoros	Local	Coastline	UNDP through their small grants programme		Yes	"Supports young and female entrepreneurs. Also works with local government, NGOs and tourist organisations. Education program in schools is planned"	"https://alwatan.net/locos/banda-bits-ou-NE2%80%82-start-de-reformuler-avec-dNC3%A8chets.html http://bandabits.org/#"	

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AFiEco	Using plastic moulding technology to turn recycled plastic into educational blocks	Upcycling	Plastics	Household and commercial waste	Macroplastics	AFiEco	Private Sector	??	on-going	Durban	South Africa	Local	Cities and towns			Yes	USE-IT	https://www.kzmf.co.za/supported-ngos http://www.afireco.co.za/	
ADONIS	Waste collection and treatment company. Exclusive collector at the port. Recyclable plastics are shredded for recycling and non-recyclable plastics are incinerated	Collection, Recycling, Plastic to energy or fuel	Industrial and hazardous wastes including plastics	Commercial waste	Macroplastics	ADONIS	Private Sector	2002	on-going	Antananarivo	Madagascar	Local	Cities and towns, Port					http://www.adonis-madagascar.com/	
ATICS	Waste collector and recycler	Collection, Recycling	Plastic containers and bags	Commercial waste	Macroplastics	ATICS	Private Sector	1992	on-going	Pailles	Mauritius	National	Cities and towns					https://www.atics-mauritius.com/en/	
Trash for Cash	Waste collected from public spaces (markets, roadsides, rivers, beaches) and recycled (plastic is stockpiled awaiting recycling facility)	Collection, Recycling	Recyclables (plastic, glass, metal, paper)	Litter	Macroplastics	KwalePlastics, Piflipo	NPO	2020	on-going	Kwale County	Kenya	Local	Cities and towns, Coastline, Rivers, Landfill		GoFundMe, funding from local authorities			https://www.kwaleplastics.com/post/and-where-does-all-our-trash-go	
Cash for Trash	Waste collection from beaches and sold to provide income	Collection, Recycling	Recyclables (plastic, glass, metal, paper)	Litter	Macroplastics	Wasamu Marine Association	NPO	2020	on-going	Wasamu National Marine Park	Kenya	Local	Coastline	Local businesses	\$10,000 raised to begin action			Interview with Steve Trout (WMA)	
Kwale Plastics	35 Green Stations and collection of household waste. Plastic waste is shredded to make building materials	Collection, Recycling	Recyclables (plastic, glass, metal, paper)	Household waste	Macroplastics	Kwale Plastics	NPO	2018	on-going	Diani and Ukunda	Kenya	Local	Coastline, Cities and towns			Yes	Base Titanium, NEMA, Kwale County Government, Kwale water rousau, Plastic Rafiki, Marine education centre Diani, Ekwai (social NGO), 16 businesses listed on website	https://www.kwaleplastics.com/waste-management	
Bio Take Back	4 plastic recycling stations installed at key shopping locations	Collection	Plastic waste	Household waste	Macroplastics	Kenya Plastics Plus Collectors, Bio Food Products Ltd	NPO	2021	on-going	Nairobi and Mombasa County	Kenya	Local	Cities and towns					https://www.kwaleplastics.com/post/pioneering-new-bio-take-back-recycling-stations-launched-in-kwale-mombasa-county	
Bio Food Products	Reduce PET in packaging by 30% and use 100% recycled plastic in yoghurt packaging	Recycling - Plastic-free eco-design	PET and yoghurt containers	Household and commercial Waste	Macroplastics	Bio Food Products Ltd	Private Sector	2020	on-going	Kenya	Kenya	National	All types of environment					https://www.kwaleplastics.com/post/pioneering-new-bio-take-back-recycling-stations-launched-in-kwale-mombasa-county	
Plastic Rafiki	Students led club recycling plastics into products (leg rings, pots, games, building materials)	Upcycling	Plastic waste (PET, HDPE, LDPE, PP, PA)	Litter	Macroplastics	International School of Kenya	NPO	2017	on-going	Nairobi	Kenya	Local	Coastline			Yes	Piflipo, Kwale Plastic Plus, UN Habitat, Wasamu Marine Association, 11 other organisations	https://plasticrafiki.com/	
Njombe Beyond	Upcycling waste plastic into useful items for the community (school materials, household items, furniture)	Upcycling	Plastic waste	Litter	Macroplastics	SHIPO SMART centre Tanzania, CEFA, Njombe Town Council, local plastic collectors, Precious Plastic	NPO	2019	on-going	Njombe	Tanzania	Local	Landfill	Mama Tanzania, Asante Sana,		Yes	SHIPO SMART centre Tanzania, CEFA, Njombe Town Council, local plastic collectors	https://www.smartcentretanzania.or.tz/index.php/projects/njombe-beyond/	
Freedom Plastic	Workshops upcycling plastic bottles and other containers into objects (flowerpots, phone cases, vases, small furniture)	Upcycling	Plastic waste	??	Macroplastics	Misson Verte, Precious Plastic	NPO	2021	on-going	Mapou	Mauritius	Local		68 financial partners (through GoFundMe)		Yes	4 schools in MAPOU, CEOs of Phoenix, Bev, PM, SOFAP, Demaine Laboratories and the Minister of the Environment	https://freedomplastic.com/home/blog/ https://community.preciousplastic.com/ufreedomplastic/	
Seychelles free from plastic bags	Campaign to reduce plastic bag use and promote alternatives	Avoidance	Plastic bags	Litter	Macroplastics	SVAH (SIDS Youth AMS Hub)	NPO	2015	??	Seychelles	Seychelles	National	All types of environment			Yes	Seychelles Prison (manufacture of alternative bags)	http://yah.seychelles.weebly.com/journey-to-plastic-bags-free-seychelles.html	

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Civic Amenity Centre	Development of 5 drop-off sites for materials that are not collected as part of the waste collection service	Recycling	Waste including plastics	Household and commercial waste	Macroplastics	Government of Mauritius	National government	2020	ongoing	Mauritius	Mauritius	National	All types of environment					http://apcc.mu/2020/10/17/civic-amenity-centre/	
Port Incinerator	Incinerator at the Port Louis Harbour to treat waste on site instead of transport to landfill	Plastic to energy or fuel	Ship waste	Commercial waste	Macroplastics	Government of Mauritius?	National government?	2010	ongoing	Port Louis	Mauritius	Local	Port	Nairobi convention				https://haat-india.com/haat-The-Company/page.php?pagecode=HAAT-05-08-2018-PGDQBTHAO	
Kopalelatra	29 collection points for PET bottles	Collection	PET bottles	Household waste	Macroplastics	STAR (drinks manufacturer and distributor), Adonis, shopping centres and service stations	Private Sector	2019	ongoing	Antananarivo	Madagascar	Local	Cities and towns			Yes	Adonis, shopping centres and service stations	https://laventre.mg/economie/item/9739-recyclage-des-bouteilles-plastiques-4-c2%AB0c0palelatra%2%BB-%2%AC-dupliquer.html	
EAST (Eau Agriculture et Sante en milieu Tropical)	Establishment of a treatment and recovery centre for plastics	Recycling	Plastic waste	Household waste	Macroplastics	SYCTOM de Paris	NPO	2016	ongoing	Antsirabe	Madagascar	Local	Cities and towns	SYCTOM of Paris	"SYCTOM Funding: Phase 1 (2016) €83,000, Phase 2 (2018) €100,000 Total project cost: €500,000"			https://www.syctom-paris.fr/engagement/solidarite-internationale/madagascar-antsirabe.html	
Les gambia de l'Ankarana	Company recycling their plastic waste into papers	Recycling	Plastic waste	Commercial waste	Macroplastics	Les gambia de l'Ankarana	Private Sector	??	??	Ambanankarana	Madagascar	Local	Cities and towns					interview	
Ecotry	Compressing bin for plastic bottles et enable collection and recycling	Collection	Plastic bottles	Commercial waste	Macroplastics	ADDEV, Adonis	Private Sector	2020	ongoing	Antananarivo	Madagascar	Local	Cities and towns			Yes	ADDEV, Adonis	http://www.midi-madagascar.mg/societe/2020/03/21/le-recyclage-de-bouteilles-en-plastique-eco-try-sinstalle-dans-les-entreprises/	
Plastic roads	Construction of new roads with recycled plastic	Recycling	Plastic waste	??	Macroplastics	Kouga Municipality, MacRebur	Local government - Private Sector	2019	ongoing	Kouga Municipality District	South Africa	Local	??			Yes	Private partner - scottish company MacRebur	https://www.thesouthafrican.com/lifestyle/eastern-cape-first-plastic-road-recycled-pellets/	
KZN plastic road	Construction of new roads with recycled plastic	Recycling	HDPE bottles	??	Macroplastics	KZN Department of Transport, Shisalanga Construction	Local government - Private Sector	2019	ongoing	KwaZulu Natal and Durban	South Africa	Local	Landfill			Yes	Private partner - Shisalanga Construction	https://edition.cnn.com/2019/10/30/business/plastic-roads-in-south-africa-int/index.html	
PETCO Kenya	Company representing the Kenyan PET industry's effort to self-regulate post-consumer PET recycling	Recycling	PET bottles	Household waste	Macroplastics	PETCO Kenya	Private Sector	2018	ongoing	Nairobi	Kenya	National	All types of environment		Financed by a voluntary EPR fee paid by converters and bottlers on the PET resin purchased, and grants from brand owners and retailers	Yes	National and county governments, industry partners (brandhold and associate members)	https://www.petco.co.ke/who-we-are/	
Operation Cleansweep	Campaign to avoid loss of plastic pellets, flakes and powder in industry	Pellet loss avoidance	Plastic pellets, flakes and powder	Avoidance	Microplastics	Plastics SA	Private Sector	2013	ongoing	South Africa	South Africa	Multinational	All types of environment					https://www.opcleansweep.org/	
Ramen out Basket	Creation of a label indicating fast food restaurants expect that the clients bring their own container for takeaway food	Avoidance	Polystyren food container	Household waste	Macroplastics	Zéro Déchet La Réunion	NPO	2019	ongoing	West coast of La Réunion, Saint Pierre, Saint Denis	La Réunion (France)	Local	Cities and towns	No		Yes	Partnership between Zero Waste Association and the local shopkeepers	2019 - https://adresse.re/amen-out-boute-dep-95-commerce-qui-engager-vers-le-zero-dechet/?fbclid=IwAR2aU5AlmKt_SehHbZhqQeKZTg_eoTMIJ_jm5K7Yn4FC0jAq2as	
Réparati Kafé	Workshops to repair defective items, some of them out of plastic	Reuse	Broken devices (electronic, music instrument...)	Household waste	Macroplastics	ÉCOPRATIK	NPO	2014	ongoing	Saint Denis, Saint Leu	La Réunion (France)	Local	Cities and towns					http://www.ecopratik.fr/	syheim.barbot@gmail.com

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Handi Bouchons Réunion	Collection of HDPE bottle tops for recycling	Recycling	HDPE bottle tops	Household waste	Macroplastics	Handi Bouchons Réunion	NPO	2006	on-going	La Réunion (France)	La Réunion (France)	Local	Cities and towns			Yes	Projet Precious plastik, EXOPRAK	https://www.hbr.handireunion.org/	
Le Comptoir du Vrac	Associative shop where all products are sold in bulk	Avoidance	Packaging	Avoidance	Macroplastics	Le Comptoir du Vrac	NPO	2017	on-going	Piton Saint Leu	La Réunion (France)	Local	Cities and towns					https://www.comptoirduvrac.fr/	
Wake Up	Grocery shop proposing bulk products and alternative to plastic packaging	Avoidance	Packaging	Avoidance	Macroplastics	Wake Up	Private Sector	2016	on-going	Saint Denis Saint Gilles	La Réunion (France)	Local	Cities and towns			Yes	Zéro Déchets (reductions for the associations members), Good Bye plastic: supplier for plastic alternatives products, Zéro Déchet La Réunion & Good Bye Plastics	https://www.facebook.com/wakeup.re/ https://www.wakeup.re/	
ILEVA Waste Sorting for recycling	Two sorting centers for recyclable waste sorting and exportation towards the Indian Ocean Sector for recycling	Recycling	Plastic waste	Household waste	Macroplastics	ILEVA (SYNDICAT MIXTE DE TRAITEMENT DES DECHETS DES MICRO REGIONS SUD ET OUEST DE LA REUNION)	Local government	2014	on-going	West of La Réunion	La Réunion (France)	Local	All types of environment					https://www.ileva.fr/	
CIVIS Waste prevention	Local waste prevention program (DIY workshops, repair promotion...)	Avoidance	All kinds of waste	Household waste	Macroplastics	CIVIS (Communauté intercommunale des Villes Solidaires)	Local government	2009	on-going	South-West province of La Réunion	La Réunion (France)	Local	All types of environment	ADEME (French national environment and energy Agency)				https://www.civis.re/index.php/generalisation-representation-la-prevention-protection-et-reduction-des-dechets	
Households plastic waste collection	Separated curbside collection of households' plastic waste, in a yellow bin, and in collection points	Collection	Recyclable waste (plastic, metal...)	Household waste	Macroplastics	CIVIS, CASUD, TCO, CIREST, CINOR	Local government	2000	on-going	La Réunion (France)	La Réunion (France)	National	All types of environment	Funding by the payment of a levy by users				https://www.civis.re/index.php/collecte-dechets/collectes-des-dechets-emergers	
CASUD Waste prevention	Local waste prevention program (DIY workshops, repair promotion...)	Avoidance	All kinds of waste	Household waste	Macroplastics	CASUD (Communauté d'Agglomération du Sud)	Local government	2011	on-going	South province of La Réunion	La Réunion (France)	Local	All types of environment	ADEME (French national environment and energy Agency)				https://www.casud.re/renseignement-et-cadre-de-traitement-des-dechets/la-prevention-des-dechets.html	
TCO Waste prevention	Local waste prevention program (DIY workshops, repair promotion...)	Avoidance	All kinds of waste	Household waste	Macroplastics	TCO (Communauté d'Agglomération du Territoire de la Côte Ouest)	Local government	??	on-going	North-West province of La Réunion	La Réunion (France)	Local	All types of environment	ADEME (French national environment and energy Agency)				https://www.tco.re/competences-et-projets/environnement-et-cadre-de-ve	
CINOR Waste prevention	Local waste prevention program (DIY workshops, repair promotion...)	Avoidance	All kinds of waste	Household waste	Macroplastics	CINOR (Communauté intercommunale du Nord de La Réunion)	Local government	2014	on-going	North province of La Réunion	La Réunion (France)	Local	All types of environment	ADEME (French national environment and energy Agency)					
CIREST Waste prevention	Local waste prevention program (DIY workshops, repair promotion...)	Avoidance	All kinds of waste	Household waste	Macroplastics	CIREST (Communauté intercommunale de La Réunion Est)	Local government	2012	on-going	East province of La Réunion	La Réunion (France)	Local	All types of environment	ADEME (French national environment and energy Agency)				www.cirest.fr	
SYDNE Waste Sorting for recycling	Sorting center for recyclable waste sorting and exportation for recycling	Recycling	Plastic waste	Household waste	Macroplastics	SYDNE (Syndicat intercommunal de traitement des déchets du Nord et de l'Est de la Réunion)	Local government	2015	on-going	East of La Réunion	La Réunion (France)	Local	All types of environment					http://www.sydne.re/nos-membres/	
PackMIR	Production of takeaway containers made 100% from plants	Plastic-free eco-design	Food containers	Avoidance	Macroplastics	PackMIR	Private Sector	2010	on-going	La Réunion (France)	La Réunion (France)	Local	Cities and towns					https://www.packmir.re/	

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Compostable la Réunion	Production of takeaway containers made 100% from plants	Plastic-free eco-design	Food containers	Avoidance	Macroplastics	Compostable La Réunion	Private Sector	2019	on going	La Réunion (France)	La Réunion (France)	Local	Cities and towns					https://www.compostablereunion.com/	
Recyclage Plastique	Local recycling of plastic waste	Recycling	Plastics	Household waste	Macroplastics	EkoPratik	NPO	under development	on going	La Réunion (France)	La Réunion (France)	Local	Cities and towns					http://www.ekopratik.fr/01940302/recycler-le-plastique-cest-possible-localement/	
CoCool	Production and marketing of products made from coconuts	Plastic-free eco-design	Plastic Packaging	Household waste	Macroplastics	CoCool	Private Sector	2018	on going	Sainte Marie Island	Madagascar	Local	Cities and towns					https://www.facebook.com/CooolMada/	
Anjaranay	Collection of PET plastic bottles for recycling	Collection	Plastic bottles	Household waste	Macroplastics	Anjaranay Ceter	NPO	2019	on going?	Sainte Marie Island	Madagascar	Local	Cities and towns			Yes	Adaric company, Cetamada association	https://www.facebook.com/centranjaranay/	
Recycling plant	Building of a recycling plant for plastics	Recycling	Plastic waste	Household waste	Macroplastics	Ministère de l'Environnement et du Développement Durable	National government	2021	on going	1 Diégo, 2 Toamasina (Ileohary Antsaramasina) et 3 Antananarivo (Manandriana Anarazana)	Madagascar	Local	Cities and towns					https://www.environnement.mg/gestion-et-transformation-des-dechets/Investissement-durable-de-letat/	
AFAM	Recycling of plastic bags	Recycling - Upcycling	Plastic bags	Household waste	Macroplastics	AFAM (Association Femmes Actives de Mutsumudu)	Community group	??	??	Mutsumudu	Comoros	Local	Cities and towns					https://afam.diev/?p=116	
South African recycling industry	240 plastics recycling processors of different sizes	Recycling	All plastics	All sources	Macroplastics	Recycling processors	Private Sector	??	on going	South Africa	South Africa	National	All types of environment					https://www.rethinkplastic.org/	
Collection and recycling plant	Building the capacity for collection and recycling of plastic bottles into pellets which will later be converted into fibre and garment	Recycling	PET Bottles	Household waste	Macroplastics	Weeco Recycling Company, Kanam Limited, TG Limited, Mr. Green Trading Africa Kenya Limited	Private Sector	2019	on going	Athi River (Nairobi), Mombasa	Kenya	Local	Cities and towns	??		Yes	PETCO Kenya	https://www.petco.co.ke/weeco/	
Zanrec	Waste management company undertaking household and commercial waste collectors for recycling and upcycling	Collection, Recycling, Upcycling	All types of waste	Household and commercial waste	Macroplastics	Zanrec	Private Sector	2011	on going	Zanzibar	Tanzania	Local	Cities and towns			Yes	Work with around 100 hotels	https://www.zanrec.com/home/solutions	
Green n Kool	Social enterprise upcycling plastic bottles into handbags and selling SUP alternatives among other waste reduction and recycling activities	Upcycling, Avoidance	PET bottles, single use plastics	Avoidance	Macroplastics	Green n Kool	NPO	2016	on going	Nosy be and Tana	Madagascar	Local	Cities and towns					https://green-n-kool.jmdofree.com/nos-active%2C3%2A9a/	
Fakotry	Development of a waste sorting, collection and transformation system	Collection, Recycling	All types of waste	Household waste	Macroplastics	Fakotry	NPO	2016	on going	Antananarivo	Madagascar	Local	Cities and towns					https://fakotry.weebly.com/about.html	
Landplast	Recycling plastic waste into interlocking paving stones	Recycling	All plastics	Household waste	Macroplastics	Landplast	Private sector	2019?	on going	Toamasina	Madagascar	Local	Cities and towns					https://www.facebook.com/Landplastamanjanahary/	
Source to sea	Tackling land based litter in hot spot communities by implementing a Source to Sea based approach: installation of booms in 5 river systems as a pilot (part of the WIO S4P projects)	Recycling - Litter collection	Surface plastics in rivers (mostly PET and HDPE)	Litter	Macroplastics	South Africa State Department of Environmental Affairs	National government	2019	on going	Durban	South Africa	Local	Cities and towns	Nairobi convention		Yes	Local private sector, NGO, Thekwini Municipality, etc.	Interview: https://filecan.net/resolved/27565194-3a0e-4504-9c42-a82c84527ac	

