Annex F (Measure 9a)
Annex F is referenced in Measure 9a (Waste Management). It is anticipated to include targets relating to expanding waste collection coverage (of households), and for increasing recycling rates.

This text is intended to help generate discussion among Members of Sub-group 1.3 (accepting that).

Annex F
Part 1
a. Collection Coverage

According to the country classification, targets are set out in Table 1 for ‘collection coverage’ as defined in Part 2 of this Annex.

### Table 1: Collection Coverage

<table>
<thead>
<tr>
<th>Current coverage (population)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country Classification</td>
<td>&gt;90%</td>
<td>&gt;75%, &lt;90%</td>
<td>&gt;40%, &lt;75%</td>
<td>&lt;40%</td>
</tr>
<tr>
<td>Target (population)</td>
<td>&gt;95% of the population, or, where this is lower 100% of population living in communities with population &gt;Y,000 (e.g. 2,500) (example 1) or 100% of population living in communities / neighbourhoods with a localised population density of less than X/km² (example 2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Target date</td>
<td>3 years after Treaty in force</td>
<td>6 years after Treaty in force</td>
<td>8 years after Treaty in force</td>
<td>10 years after Treaty in force</td>
</tr>
<tr>
<td>Interim targets</td>
<td>None</td>
<td>+10% change (or target met)</td>
<td>+20% change or at least 85% (or target met)</td>
<td>70% (or target met)</td>
</tr>
<tr>
<td>Interim target date</td>
<td>4 years after Treaty in force</td>
<td>6 years after Treaty in force</td>
<td>7 years after Treaty in force</td>
<td></td>
</tr>
</tbody>
</table>

**Rationale:**
There are few, if any, studies which have sought to understand flows of plastic into rivers and oceans (or onto land) that have not singled out the failure to collect / the mismanagement of waste as a key factor in augmenting these flows. Unless use of plastics is to be severely curtailed in
these circumstances, then the problem will persist without improved collection and management of plastic (and other) wastes. The intention is to establish targets for ‘collection coverage’, but also to give the term ‘collection coverage’ some meaning (there are few useful definitions in place at present). The targets for coverage, along with the definition in Part 2 (see below), are intended to provide the basis for a backstop solution to the problem of plastic polluting the land, rivers and oceans.

Parties are differentiated according to the current extent of coverage of their territory by collection systems. For the basis of the Classification of Parties, existing rates of collection coverage will be used: where these are poorly understood / not known, or known to be low, a Party’s classification will default to that which would reflect the lowest rate of coverage, consistent with what is known regarding its current collection infrastructure.

b. Recycling Targets

Other Plastic Packaging

The targets in Table 2 are set for plastic packaging. The scope of plastic packaging is all packaging, whether primary, secondary or tertiary in nature.

Table 2: Recycling Targets, Plastics Packaging

<table>
<thead>
<tr>
<th>Country Grouping</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Packaging</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beverage containers</td>
<td>80%</td>
<td>3</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>collection rate 90% of units</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>recycling rate 90% of units collected</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-beverage bottles</td>
<td>70%</td>
<td>6</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Other rigids</td>
<td>60%</td>
<td>6</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Flexibles</td>
<td>50%</td>
<td>6</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>(or, e.g., 70% x commercial + 40% x household)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Country groupings are considered the same as those defined through reference to current collection coverage (see above)

Rationale: The example above indicates a possible approach to setting targets for recycling of packaging. The rationale is to establish suitably stretching (against current performance) levels of recycling, but to allow for a longer time-period for those who have made less progress thus far. The timelines also take their cue from the collection coverage targets above. The ‘maximum time’ to target reflects the collection coverage issue, as well as the need to develop infrastructure.

Higher targets, at earlier dates, are set for beverage packaging. These could be included under deposit return systems, as per Measure 3a in our text.
The targets are relatively crudely differentiated so as to avoid requiring overly burdensome data collection, though it might be considered that the capability to capture better quality data is improving over time, and might be considered desirable for other reasons.

c. Phasing Out Uncontrolled Burning and Uncontrolled Dumping

Parties shall take measures to:

- ensure that residents and businesses living in areas where waste collection services are already being provided in line with Part 2 below are required to make use of those services where they are generating wastes targeted for collection;
- ensure that policy and law are implemented so as to prevent the uncontrolled burning of waste wherever collection services in line with Part 2 below are in place;
- ensure that all collected waste is delivered, either directly or via suitably designed transfer stations, to facilities equipped to manage the waste fraction as delivered to the facility under a high degree of control, maximising the potential for recycling, and minimising the potential for environmental problems to arise.

<table>
<thead>
<tr>
<th>Country Classification</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>End to uncontrolled burning</td>
<td>3 years after Treaty in force</td>
<td>6 years after Treaty in force</td>
<td>8 years after Treaty in force</td>
<td>10 years after Treaty in force</td>
</tr>
<tr>
<td>Target date</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interim measures</td>
<td>Each Party shall ensure that wherever collection services meeting the criteria set out in Annex F Part 2 a are in place, policy and law should be designed prevent uncontrolled burning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>End to uncontrolled dumping</td>
<td>3 years after Treaty in force</td>
<td>6 years after Treaty in force</td>
<td>8 years after Treaty in force</td>
<td>10 years after Treaty in force</td>
</tr>
<tr>
<td>Target date</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interim measures</td>
<td>Each Party shall ensure that all wastes are required to be delivered to locations designated / licensed for receiving waste by the Party: the quality of management at these sites must be progressively increased over time to ensure that the threat they pose to human health and the environment is eliminated as far as possible</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Country groupings are considered the same as those defined through reference to current collection coverage (see above)

Rationale

We use the term uncontrolled burning rather than ‘open burning’, as the latter can give the impression that burning plastic in private residences is acceptable when clearly it is not. The same applies to uncontrolled dumping.

Functional collection services are a necessary component to support the eradication of these
activities: where does waste go in the absence of it being collected / taken to a specific location where it can be managed properly? Matter is conserved, and dumping and burning are a response to there being no convenient, acceptable and safe management for plastics. That basic fact underpins the view of producer funding of waste collection and management as part and parcel of a producer’s (social) license to operate.

The elimination of uncontrolled burning is likely to follow the roll-out of waste collection services: for the elimination of uncontrolled dumping, ideally, the development of infrastructure leads (in time) the development of collection services, though sequencing is rarely perfect, and it is common for jurisdictions to ‘appoint’ some uncontrolled dumps as ‘officially sanctioned’ ones designated for receiving collected waste if the requisite infrastructure has not developed.
Part 2: Methodologies

a. Waste Collection Coverage

1. Each Party shall take measures to design waste management services, and to expand their coverage to ensure that discarding of (macro-) plastic products into the environment at the end of their life is minimised.

2. Each Party will ensure that all plastics placed on the market are collected, at end of life, using systems which are of high quality, are convenient for users, do not negatively affect the health of the operatives and are informed by operational matters.

3. Parties are required to establish their own minimum service specification for approval by the governing body* aligning with the principles set out in Schedule 1.

4. All plastics collected in line with Paragraph 2 must, following their collection, be managed responsibly, so that none of the waste collected is either burned without proper controls, or sent to uncontrolled dumps.

5. Parties shall ensure that their systems of policy and law require the progressive coverage of their territory by systems which meet the conditions under Paragraph 2 and elaborated as per Paragraph 3 (and Schedule 1) so that the targets set out in Part 1 (see above) are met in a timely fashion. For the avoidance of doubt, where services provided to citizens or communities fall below the standard set out in Schedule 1, those citizens / communities shall not be considered to be ‘covered by’ a waste collection service when reporting performance against the targets under Part 1.

6. Parties shall ensure the stable funding of waste collection and management services on an ongoing basis, covering both ongoing operational costs as well as flows of funding that support, and / or make directly, investment in equipment and processing facilities, including for (but not limited to) recycling. This should be covered by revenues collected as a result of implementing Measure 7 [Extended Producer Responsibility].
Schedule 1
This Schedule sets out criteria to be used to define the minimum level of collection service which is considered to be sufficiently convenient, and where the service is delivered with the necessary quality, to:

- enable those to whom the service is provided to manage their waste in a manner that does not inconvenience them;
- ensure that the waste is collected with sufficient frequency such that the amount of plastic (and other) waste does not exceed the ability of a household to store the accumulating waste, or the capacity of containers to hold the collected waste; and
- ensure that operational considerations are properly taken into account.

The criteria below differentiate between door-to-door / curbside / kerbside collection and collection systems (“bring systems”) where citizens / businesses are required to deliver waste into containers designated for the purpose of (plastic) waste collection.

The criteria also try to take into account the interaction between different aspects of a waste collection service. It is recommended that the collection of plastics takes place as part of a well-designed service for collection of all wastes. In any event, recognising that sorting is rarely perfect, even where there is provision for a collection of separated plastics (either alone, or with other materials), plastics may be collected both as part of a stream of wastes intended for recycling, and as part of a ‘leftover mixed waste’ (LMW) stream (and the design of the service will influence the relative proportions in each stream).

Door-to-door / curbside / kerbside
Key criteria are:

- That the volume of waste which is (typically) accumulated between successive collections is capable of being easily stored by households, taking into account the spatial constraints they may face. The volume of plastic (and other) waste generated between successive collections should be readily accommodated by the service; and
- That the approximate timing of each collection is made known to those using the service (so that they do not miss collections, thereby leading to problems of storage; and
- That the vehicles used to collect and transport waste are chosen so that they may service all the households expecting a collection.

Depending on the nature of the service, specific containers may be given for use by households, or may be specified for use by households.

It should be considered that collection frequencies will likely need to be higher for households where space is a constraint, and / or where ambient temperatures are higher.

Service specifications should consider (for example):

- The current role of informal collectors in providing services, and how they can be integrated into service provision in an inclusive and just manner. It is suggested that waste pickers are included in the process of formulating the service specification;
- How many different ‘streams’ will be collected;
- Estimating the volume of waste that may be collected in each stream from the households;
- Setting a minimum frequency of collection for each different stream. This should consider the climate, but also, might be varied according to the specific living conditions of the population;
Specifying appropriate forms of containment for wastes being collected in different streams, taking into account the potential for vermin to access wastes;

The potential for using ‘bring’ schemes for some wastes as appropriate / as an alternative to the door-to-door / kerbside / curbside approach;

Bring / Designated Collection Point Systems

Bring systems have to ensure that:

- The current role of informal collectors in providing services, and how they can be integrated into service provision in an inclusive and just manner. It is suggested that waste pickers are included in the process of formulating the service specification;
- The collection containers are a convenient distance from the households / communities they serve, or are (in less densely populated areas) placed at locations frequented by households / communities;
- Where containers are in place for separately collected materials, where possible, efforts should be made to minimise incorrect materials in the container (caretakers at apartment buildings, suitably designed containers);
- The locations of collection containers are well publicised;
- The locations of collection containers are such that they can be easily accessed by the vehicles designated for their emptying, and the vehicle can easily continue its journey;
- The collection containers are of sufficient volume, and emptied at sufficient frequency, to ensure they do not overflow (contributing to the problem of mismanagement of plastics);
- The collection containers are emptied at sufficient frequency to ensure they do not pose other problems, including incidence of vector-borne diseases.

Service specifications may wish to consider (for example):

- in urban and suburban zones,
  a. requiring space to be provided for in apartment buildings to accommodate containers for the residents;
  b. setting maximum distances for households to have to walk (e.g. 100m), other than in exceptional circumstances, and /or setting minimum densities of container (e.g. X per Y residents)
- In all cases:
  a. The current role of informal collectors in providing services, and how they can be integrated into service provision;
  b. The combined volume of containers at a given location, and the frequencies of collection / emptying, should allow for the peak daily volume of plastic generation by households served to be accommodated without the containers overflowing.
  c. The extent to which valuable materials may simply be removed from openly accessible containers (and the possibility for alternative systems, including door-to-door / curbside / kerbside collection in such circumstances);
  d. When waste collection is organized with source separation (2 or more fractions), the relative convenience (and incentives) must be considered (including location of the collection point, the nature of the waste fraction and local circumstances) to maximize likelihood of the desired use of the service, and reduce cross contamination.

Rationale

UN-Habitat has sought to define access to collection services as follows:

The proportion of Population with Access to Basic MSW Collection Services is the proportion
of the population who receive waste collection services that are either basic, improved or full, defined by the service ladder of MSW collection service.

The service levels referred to are set out below.

<table>
<thead>
<tr>
<th>Service Level</th>
<th>Door-to-door</th>
<th>Definition</th>
</tr>
</thead>
</table>
| **Full**      | » Basic frequency and regularity  
» Without major littering  
» Separation in three or more fractions | » Within 200m distance  
» Basic frequency and regularity  
» Without major littering  
» Separation in three or more fractions |
| **Improved**  | » Basic frequency and regularity  
» Without major littering  
» Separation in two fractions | » Within 200m distance  
» Basic frequency and regularity  
» Without major littering  
» Separation in two fractions |
| **Basic**     | » Basic frequency and regularity  
» Without major littering  
» No Separation | » Within 200m distance served  
» Basic frequency and regularity  
» Without major littering  
» No Separation |
| **Limited**   | » Without basic frequency and regularity  
» With major littering | » Within 200m distance but no basic frequency and regularity or  
» Further than 200m distance  
» With major littering |
| **No**        |             | Receiving no waste collection service |


The definition, whilst it has merits of simplicity, is too loose given the nature of what we are seeking. It does not clarify what it means by a ‘basic frequency and regularity’. To the extent that this is implicit, it suggests that with ‘basic frequency and regularity’ there would not be ‘major littering’ whereas without it, there would be ‘major littering’. Such a distinction potentially underplays the extent to which littering can be avoided where waste is simply burned (and not littered).

A regards door to door collection, the reference to different numbers of fractions might not be helpful without specifying what these are. On designated collection points, a 200m distance seems potentially inconvenient in an urban area, not least where traffic is heavy. The distance moved is a useful indicator of convenience but the relevant distances may also depend on what is the nature of the living situation a resident is ‘going into’ and ‘going out of’ on a daily (or frequent) basis. A basic principle may be that a formal collection point should be at least as convenient as the current uncontrolled locations being used, though that is hardly likely to satisfy.

The specification also lacks reference to, for example, the operational matters such as ease of access by vehicles: placing containers in locations where the vehicles which can empty the containers cannot move, or cannot get to, is a frequent problem in new developments.

It is difficult to draw up a universally applicable standard for all Parties. There is a need for some ‘local adaptation’, reflecting the living circumstances of populations.

Examples of such specifications exist in various contexts. They typically have the merit of guaranteeing a level of ‘customer service’ so that households know what quality of service they will receive, irrespective of where they are in a given nation. This can also aid communication
activities around the service. They also act as guidance to those who may be charged with developing a collection service, but who may have limited experience of doing so. In this matter, it is easy to make bad choices, and a well-designed service specification can help reduce the likelihood of that happening. It is appropriate to set different specifications for

This type of approach has much to recommend it. If the household were a customer, it would read like a minimum level of customer service. What our approach seeks to do is allow Parties to come forward with their own proposals, reflecting local demographics, the range of living situations of residents, and other matters such as climate.

Consistent with EPR being implemented, service requirements should be linked to expected infrastructure provision so as to ensure recycling rates (see Part 1) are achieved, whilst not necessarily being completely prescriptive regarding the exact method of service delivery (e.g. in terms of vehicles used, etc.). It is important to point out that few EPR schemes take over responsibility for the collection of ‘packaging’, or of ‘plastics’ (some do, sometimes offering opting out of service provision as an option to municipalities). Where municipalities remain the collectors of waste, it is important that the collections they offer are conducive to achieving the outcomes being sought (e.g. packaging recycling rates). Hence, without an adequate service specification, it cannot reasonably be made the responsibility of producers to meet the desired targets.

b. Measuring Recycling Rates:

1. For the purpose of calculating whether the targets laid down in Part 1 have been attained:
   a. Each Party shall collect data from producers, preferably through an appropriate register, regarding the weight of the different categories of plastic packaging waste placed on the market within the jurisdiction of the Party. This shall include packaging waste linked to products purchased on-line / from distant sellers.
   b. Each Party shall audit the data collected from individual producers periodically.
   c. Each Party shall use such data to provide estimates of the quantity of plastic packaging placed on the market in a given year;
   d. Parties shall collect data from recyclers regarding the quantity of domestically generated plastic waste which is recycled in the same year. If domestically generated plastic waste from one Party is exported for recycling in another Party, the exporter shall provide well-documented evidence of the quantity exported, and the quantity actually recycled in line with sub-paragraph (e);
   e. the weight of the packaging waste recycled shall be calculated as the weight of waste which, having undergone all necessary checking, sorting and other preliminary operations to remove materials other than those targeted by the final reprocessing operation, enters the operation whereby waste materials are actually reprocessed into products, materials or substances.

2. For the avoidance of doubt, for the purposes of point (d) of paragraph 1, the weight of the packaging waste recycled shall be the measured quantity which enters the final reprocessing operation identified as per para 1(e) above.

Rationale
The ‘recycling rate’ for plastic packaging is especially prone to inaccurate measurement (and usually, overestimation) as a result of the fact that packages are of low weight, they may not be fully emptied of the products they contain (at the point where ‘recycling’ is measured), there may be contaminating materials attached to them (depending on how they are collected and sorted), there may be non-target materials in the waste collected / sorted (including labels, but also, dirt, etc.), and so there are losses as the packages move from collection to final recycling. The amount placed on the market, on the other hand, is usually measured as ‘clean’ and often free of labels
that may be attached.

Methodological guidelines are needed to align what is being measured in the numerator (how much is recycled) with what is in the denominator (how much waste is out there), so that the recycling rate genuinely reflects the degree to which plastic packages are recycled.