COMMON DEFINITIONS FOR THE GLOBAL TOURISM PLASTIC INITIATIVE ***(extracted and adapted from the Ellen MacArthur Foundation's "New Plastic Economy Global Commitment")***

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1. Introduction

The Global Tourism Plastics Initiative contains terms such as 'reusable', 'recyclable', 'compostable', 'renewable' and 'recycled content'. This appendix provides common definitions to underpin it, aiming to provide transparency and consistency. Signatories of the Global Tourism Plastics Initiative agree to use and refer to this terminology as a basis for their commitments and related reporting on progress.

Definitions are shown in boxes and often include footnotes with clarification. Additional notes below the definitions provide more context and/or examples.

This appendix is extracted and adapted from the Ellen MacArthur Foundation's "New Plastic Economy Global Commitment", and is built on an extensive review of existing definitions, detailed discussions with dozens of experts, and a broad stakeholder review process involving over 100 organisations and experts across businesses, governments, NGOs, academics and standard-setting organisations. This appendix builds on ISO definitions where possible and relevant.[1] Next to packaging, this appendix includes plastic items that are non-durable, such as straws, cutlery and cups. These items are typically used briefly and often only once, and ending up as waste shortly after its use. As such, there are strong similarities to how plastic packaging is used and how it also creates plastic pollution.

Many of the definitions here could also be applicable outside the context of the Global Tourism Plastics Initiative, although some (e.g. 'recyclable') do remain inherently context dependent. Although most principles and some terms defined in this appendix could apply to all plastics and/or all packaging, this appendix focuses on common definitions for plastic packaging.

2. Take action to eliminate problematic or unnecessary plastic packaging and items

In order to achieve a circular economy for plastics, it is important to carefully consider what plastic is provided in the first place. This commitment recognises that principle, and signals the intent of companies to actively identify problematic and unnecessary plastic packaging in their portfolio and to take action to eliminate those through redesign, innovation, and new (reuse) delivery models.

The importance of eliminating problematic and unnecessary items is already widely recognised in multiple businesses' packaging strategies, in the European Commission's minimum requirements for packaging and in its '*Strategy for plastics in a circular economy*', in the G7 Ocean Plastics Charter, and in the UK Plastics Pact, which includes this commitment and has been signed by over 90 organisations.

The following list of criteria is provided to help identify problematic or unnecessary plastic packaging, plastic packaging components and items:

1. It is not reusable, recyclable or compostable (as per the definitions below).
2. It contains, or its manufacturing requires, hazardous chemicals[2] that pose a significant risk to human health or the environment (applying the precautionary principle).

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[2] Hazardous chemicals are those that show intrinsically hazardous properties: persistent, bio-accumulative and toxic (PBT); very persistent and very bio-accumulative (vPvB); carcinogenic, mutagenic, and toxic for reproduction (CMR); endocrine disruptors (ED); or equivalent concern, not just those that have been

3. It can be avoided (or replaced by a reuse model) while maintaining utility.
4. It hinders or disrupts the recyclability or compostability of other items.
5. It has a high likelihood of being littered or ending up in the natural environment.

The elimination and/or replacement by alternatives should happen with a system's perspective, taking into account impacts on the entire (packaging and packaged goods) system and avoiding unintended consequences.

Businesses are encouraged to extend this commitment beyond plastic packaging to all packaging and plastic items they put on the market.

3. Take action to move from single-use towards reuse models

Reuse models are the preferred 'inner loop' wherever relevant, and beneficial, since it retains the most value in the system. New (information) technologies, innovative business models, and evolving use patterns are unlocking and facilitating new reuse opportunities. This has the potential to significantly reduce the need for single-use packaging. See the definition of reusable packaging in Section 4.1.

Businesses are encouraged to extend this commitment beyond plastic packaging to all packaging and plastic items they put on the market.

4. 100% of plastic packaging to be reusable, recyclable, or compostable

In a circular economy, waste and pollution are designed out, products and materials are kept in use, and natural systems are regenerated. Each system, service, product or packaging item needs to be designed to fit such an economy. This means that each piece of (plastic) packaging is either recyclable or compostable[3,4], ideally after several reuse cycles:

a) Reuse is the preferred 'inner loop' wherever relevant and beneficial.
b) All packaging should be designed to be recycled (mechanically or chemically) or (where relevant for specific, targeted applications, not as a blanket solution) composted to keep the materials in the economy or return them safely to the biosphere, preferably after going through a number of reuse cycles.

100% reusable, recyclable, or compostable plastic packaging commitments are important, as the circularity of a packaging item starts with its design. In some cases, existing solutions are available and proven to be viable; in others, further innovation in business models, packaging designs, collection, sorting, and recycling technologies will be required to achieve this commitment in a viable way that avoids unintended consequences.

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regulated or restricted in other regions (Source: Roadmap to Zero, definition based on EU REACH regulation - http://www.roadmaptozero.com/).

[3] Organic recycling includes composting and anaerobic digestion. Along with composting, anaerobic digestion can also be considered as a circular after-use pathway for plastics packaging, in line with ISO 18606. However, as the Foundation believes the use of anaerobic digestion is currently limited for plastic packaging as at the date of publication, this appendix focuses on composting. For some very specific applications, biodegradation or dissolving of packaging (e.g. edible packaging, dishwasher tablet packaging) can also be considered part of a circular system for plastic packaging, and counted towards achieving this commitment, if proven that the entire biodegradation process takes places within a reasonable timeframe in all environmental conditions where it is likely to end up.

[4] Or both recyclable and compostable. While the Foundation believes (based on research conducted to date) that no compostable plastic packaging is currently recycled at sufficient scale to be also 'recyclable' according to the definitions in this appendix, certain plastic packaging that is compostable and could technically be recycled has been developed, such as packaging made with PLA, PBS or PHA. It is important for packaging aimed to be recycled and packaging aimed to be composted to be separated, so the material streams do not contaminate each other.

4.1 Reusable packaging

Reuse

Definition: Reuse of packaging
Operation by which packaging is refilled or used for the same purpose for which it was conceived, with or without the support of auxiliary products (1) present on the market, enabling the packaging to be refilled.

Source: ISO 18603:2013, *Packaging and the environment - Reuse*, modified (clarification in note 1 below).

Note

1. An auxiliary product is a product used to support the refilling/loading of reusable packaging. (...) An example of an auxiliary product is a detergent pouch used to refill a reusable container at home (ISO 18603). As per ISO 18603, auxiliary products that are one-way products (i.e. designed to be used once) are not considered reusable packaging.

Further explanatory notes

a. Attention should be paid to the intended use and function of the packaging, in order to verify whether it is being reused for the same purpose or a secondary use. In the latter case the packaging is not considered as reusable packaging (ISO 18603, '*Packaging used for the same purpose*'), e.g. the use of a package as a pen-holder or as decoration cannot be qualified as reuse.

b. A package is considered reusable if the design of the packaging enables the principal components to accomplish a number of trips or rotations in normally predictable conditions of use (ISO 18603). According to ISO 18601, a packaging component is a part of packaging that can be separated by hand or by using simple physical means (e.g. a cap, a lid, a (non in-mould) label).

Examples

Packaging can be reused in different ways:

- Business-to-business applications: packaging is reused through a redistribution system between one or more companies[5] (e.g. pallets loaded with the same or different product,[6] crates, pallet wraps)
- Business-to-consumer applications: packaging returned to the supplier or a third party to be cleaned and reused for the distribution and sale of an identical or similar product (e.g. a container that is part of a deposit return or refund system for reuse, a returnable transportation packaging item, a reusable container in the food service industry) or packaging not returned to the supplier, but instead reused by the user as a container or as a dispenser for the same product supplied by the manufacturer for the same purpose (such as a reusable spray bottle for cleaning products for which the manufacturer provides refills).
- The booklet 'Reuse - rethinking plastics', created by the Foundation, offers a framework to understand reuse models, identification of six major benefits of reuse, and mapping of 69 reuse business examples.

Reusable packaging

[5] ISO 18603:2013, *'Closed-loop system'/'Open-loop system'* definitions: Reuse can take place within a company or a cooperating group of companies (closed-loop) or amongst unspecified companies (open-loop).
[6] ISO 18603:2013, '*Packaging used for the same purpose*' definition: Reuse of pallets, loaded originally with dairy products and now loaded with house bricks is reuse for the same purpose.

Definition: Reusable packaging
Packaging which has been designed to accomplish or proves its ability to accomplish a minimum number of trips or rotations (1,2) in a system for reuse (3,4).

Source: ISO 18603:2013 - *Packaging and the environment - Reuse,* modified (packaging component mentioned in notes)

Notes

1. A trip is defined as transfer of packaging, from filling/loading to emptying/unloading. A rotation is defined as a cycle undergone by reusable packaging from filling/loading to filling/loading (ISO 18603).
2. The minimum number of trips or rotations refers to the fact that the 'system for reuse' in place should be proven to work in practice, i.e. that a significant share of the package is actually reused (measured e.g. by an average reuse rate or an average number of use-cycles per package).
3. A system for reuse is defined as established arrangements (organisational, technical or financial) which ensure the possibility of reuse, in closed-loop, open-loop or in a hybrid system (ISO 18603).
4. See above for the definition of reuse, which stresses amongst other things the need for the packaging to be refilled or used again for the same purpose for which it was conceived.

Further explanatory notes

a. For a container to qualify as reusable, there needs to be a 'system for reuse' in place that enables the user of the package to ensure it is reused in practice where the item is placed on the market. Such a system for reuse should be able to prove a significant actual reuse rate, or average number of use-cycles of a package, in normal conditions of use.

b. A package is considered reusable if the design of the packaging enables the principal components to accomplish a number of trips or rotations in normally predictable conditions of use (ISO 18603:2013).

c. According to ISO 18601, a packaging component is a part of packaging that can be separated by hand or by using simple physical means[7] (e.g. a cap, a lid, a (non in-mould) label).

d. Single-use packaging (i.e. designed to be used once) aimed at delivering a refill for a reusable package is not considered reusable packaging.

e. A reusable item can undergo reconditioning, that is operations necessary to restore a reusable packaging to a functional state for further reuse (ISO 18603:2013).

f. Reusable packaging should be designed to be recyclable, as it will inevitably reach the maximum number of reuse cycles at some point, after which recycling ensures the material is kept in the economy.

4.2 Recyclable packaging

Recycling
References to 'recycling' in this appendix always refer to 'material recycling'.

Definition: Material recycling
Reprocessing, by means of a manufacturing process, of a used packaging material into a product, a component incorporated into a product, or a secondary (recycled) raw material; excluding energy recovery and the use of the product as a fuel.

[7] ISO 18601:2013, Packaging component definition.

Source: ISO 18604:2013 - *Packaging and the environment — Material recycling,* modified (note to entry not applicable).

Further explanatory notes

a. This includes both mechanical (maintaining polymer structure) and chemical (breaking down polymer structure into more basic building blocks, e.g. via chemical or enzymatic processes) recycling processes.
b. It explicitly excludes technologies that do not reprocess materials back into materials but instead into fuels or energy.
   Chemical recycling can be considered in line with a circular economy if the technology is used to create feedstock that is then used to produce new materials. However, if these same processes are used for plastics-to-energy or plastics-to-fuel applications, these activities cannot be considered as recycling (according to ISO definitions), nor as part of a circular economy. For a chemical recycling process, just like for the production of virgin plastics, no hazardous chemicals[8] should be used that pose a significant risk to human health or the environment, applying the precautionary principle.
c. A high quality of recycling and of recycled materials is essential in a circular economy, where one aim is to keep materials at their highest utility at all times. This maximises the value retained in the economy, the range of possible applications for which the material can be used, and the number of possible future life-cycles. It therefore minimises material losses and the need for virgin material input.
   - Maximising the quality and value of materials during recycling is made possible through a combination of packaging design and high-quality collection, sorting, cleaning, and recycling technologies and systems.
   - On the design side, organisations such as APR, PRE, EPBP, RECOUP and others have design-for-recyclability guidelines for plastic packaging that, as well as recyclability, often indicate the quality of the recycled output (e.g. through traffic light systems or classifications such as 'preferred for recycling' versus 'detrimental for recycling').

Recyclable packaging

Recyclability is perhaps the most ambiguous term amongst all packaging circularity terminology. 'Recyclable' means different things to different people in different contexts.

In the context of the Global Tourism Plastics Initiative, where the term 'recyclable' is used for commitments by businesses that provide packaging, 'technically recyclable'[9] is clearly not enough: recycling does not just need to work in a lab. Instead it should be proven that packaging can be recycled in practice and at scale.

'At scale' means that the proof needs to be more than a lab test, a pilot, or a single small region. It means that recycling of a certain packaging type needs to be proven to work in practice in multiple regions, collectively representing a significant geographical area in terms of population size, ideally across different country and city archetypes. This to indicate that the recycling in practice is replicable, and that the design of the packaging is not the barrier to realise recycling in practice in other countries.

[8] As defined in Appendix V.

[9] Technical recyclability considers the technical possibility to recycle a package, but does not take into account if the collection, sorting, and recycling of the package happens in practice, at scale, and with reasonable economics (e.g. it could work in a lab or in one (pilot) facility but not be economically viable to replicate at scale). Therefore, such a definition does not directly correlate to what is actually recycled in practice, and it would result in almost all packaging being considered 'recyclable'.

'In practice' means that within each of these regions, the recycling system (end-to-end system from consumer to recycled material) effectively recycles a significant share of all packaging of that type put on the market. In other words, in that area a significant recycling rate is achieved for that type of packaging.

Moving towards only using 'recyclable' packaging as described above is a necessary first step, but is one that should happen in conjunction with other efforts to ensure all packaging is actually recycled in practice in every market where it is used.

Definition: Recyclable packaging

A packaging (1) or packaging component (2,3) is recyclable if its successful post-consumer (4) collection, sorting, and recycling (5) is proven to work in practice and at scale (7).

Notes

1. In the context of a 2025 timeframe and the Global Tourism Plastics Initiative, a package can be considered recyclable if its main packaging components, together representing >95% of the entire packaging weight, are recyclable according to the above definition, and if the remaining minor components are compatible with the recycling process and do not hinder the recyclability of the main components. Otherwise, only the recyclable components of a package (or the recyclable parts of components - see footnote 3) can be counted towards achieving this commitment, and only when other components do not hinder or contaminate their recyclability.

   Examples:

   - If a bottle and its cap are recyclable, the packaging can be claimed to be recyclable if it has a label (<5% of total weight) that does not hinder the recyclability of the bottle and cap.

   - If that same bottle has a label that hinders or contaminates the recycling of the bottle and cap, the entire packaging is non-recyclable.

   - If a package has (a) certain component(s) that are not recyclable and that make up >5% of the total packaging weight (e.g. 12%) and that do not hinder or contaminate the recycling of the remaining recyclable components of the package, then only that recyclable part (e.g. 88%) can be counted towards this commitment.

   Longer-term, the aim should be for all packaging components (e.g. including labels) to be recyclable according to the above definition.
2. A packaging component is a part of packaging that can be separated by hand or by using simple physical means (ISO 18601), e.g. a cap, a lid and (non in-mould) labels.
3. A packaging component can only be considered recyclable if that entire component, excluding minor incidental constituents (6), is recyclable according to the definition above. If just one material of a multi-material component is recyclable, one can only claim recyclability of that material, not of the component as a whole (in line with US FTC Green Guides[10] and ISO 14021).
4. ISO 14021 defines post-consumer material as material generated by households or by commercial, industrial and institutional facilities in their role as end users of the product which can no longer be used for its intended purpose. This includes returns of material from the distribution chain. It excludes pre-consumer material (e.g. production scrap).
5. Packaging for which the *only* proven way of recycling is recycling into applications that do not allow any further use-cycles (e.g. plastics-to-roads) cannot be considered 'recyclable packaging'.

[10] US Federal Trade Commission (2012), Guides for the Use of Environmental Marketing Claims ("Green Guides"), Part 260.

6. ISO 18601:2013: A packaging constituent is a part from which packaging or its components are made and which cannot be separated by hand or by using simple physical means (e.g. a layer of a multi-layered pack or an in-mould label).
7. The suggested test and threshold to assess if the recyclability of a packaging design is proven 'in practice and at scale' is: Does that packaging achieve a 30% post-consumer recycling rate in multiple regions[11], collectively representing at least 400 million inhabitants? A possible alternative, especially relevant for more local players, is to check if a 30% post-consumer recycling rate is achieved in all the markets where your packaging is sold. The above thresholds might be reviewed over time as more data becomes available.

Further explanatory notes

a. By being based on the principle that recycling needs to be proven to work in practice and at scale, the definition requires the entire system to be proven to work: material choices, packaging design, the manufacturing process, the most likely way of using, disposing and collecting the packaging, and the availability, compatibility, and performance of infrastructure for collection, sorting and recycling. It also implicitly requires the system to work technically, conveniently (if it works in practice and at scale, it must be convenient enough for actors in the system to participate) and economically (if it works in practice and at scale, it must be that the economics are reasonable and that there are end markets for the resulting material).

b. By being based on the principle that recycling needs to work in practice and at scale, the definition of recyclable packaging allows for innovation. A packaging item that is not currently recyclable could be so in future (e.g. by putting in place effective collection, sorting and recycling technologies at scale).

c. It is important to assess the recyclability of each package separately, taking into account its design, manufacturing processes and most likely way of using, disposing and collecting it, which all have a significant impact on the possibility and probability of the package being recycled in practice. For example:
   - Design: For example, choices of materials, the shape and size of the packaging, additives and colourants, glues, inks, caps, labels.
   - Manufacturing process: For example, sometimes additives are added to facilitate the manufacturing process or residual amounts of catalysts or other products end up in the packaging during the manufacturing process.
   - Most likely way of using and disposing: One should assume the most likely way of using and disposing of the packaging and not assume unlikely conditions. For example, in most countries one cannot assume that a significant share of households will disassemble packaging before disposing of it. Other questions to consider include: Would the package be disposed most often with or without the label or cap still attached? Would it most likely be disposed of empty and clean, or contaminated with product residues, glue or lid residues?
   - Most likely way of collecting: Is the pack most likely to end up in a collection system for business-to-business bulk materials or in that for household materials? A package could be recycled in practice and at scale in business-to-business but not in business-to-consumer applications (e.g. PE pallet wraps usually end up in different collection systems than PE wraps around consumer products).

d. While the definition does not specify where a package is recycled (i.e. allowing for the export and import of materials), businesses should ensure any exported

[11] Regions can be any geographic area (countries, states, provinces, ...), anywhere in the world.

packaging actually gets recycled before considering the recycling pathway to work in practice.

e. The available technical design-for-recycling guidelines by organisations such as APR, PRE, EPBP, RECOUP and others bring a more technical and in-depth analysis of design for recycling prerequisites. As such, these guidelines are complementary to the 'recyclable' definition of this appendix, and businesses are encouraged to refer to and apply these design-for-recyclability guidelines.

The thresholds to assess if the recyclability of a packaging design is proven 'in practice and at scale' (i.e. the 30% post-consumer recycling rate in multiple regions[12], collectively representing at least 400 million inhabitants - see note 7 in recyclability definition box) are not intended to be achieved *today*, but aim to define an ambitious yet realistic target to reach by 2025. Please see Appendix V outlining a suggested methodology for the assessment of recyclability of plastic packaging, but note that for signatories of the Global Tourism Plastics Initiative, this assessment is currently not required to undertake.

The 'recyclable' definition above applies at a global level for global commitments: it is a characteristic of packaging and is not linked to any local context or specific geographical area. As such, this definition does not apply to claims linked to specific geographical areas (e.g. on-pack recycling labels, customer communications), as these should always take into account the local context and systems in place (in line with ISO 14021 and US FTC), and be in line with the local regulations that apply to such claims.

Finally, it is important to stress once more that, while the commitment to make all packaging recyclable by 2025, according to the definition above, is a necessary first step, it is not an end goal in itself. The target state to aim for is one in which all packaging is actually recycled in all markets where it is put on the market (ideally after several reuse cycles and not including some targeted applications where compostability might be the preferred solution).

4.3. Compostable packaging

In a circular economy, all (plastic) packaging should be designed to be recyclable, or where relevant compostable[13] (or both)[14], ideally after several reuse cycles. As designing packaging for recycling comes with the advantage of keeping the value of the material in the economy, it is in many cases preferred over designing for composting. However, the latter can be valuable for targeted applications where considered appropriate and beneficial, if coupled with the relevant collection and composting infrastructure to ensure it gets composted in practice.
These targeted applications include packaging items for which composting offers a mechanism to return biological nutrients from the product the packaging contains, which would otherwise have been lost, back to the soil in the form of fertiliser or soil improver. Examples could include tea bags, compostable bags for compost collection in cities, or packaging materials that often end up in organic waste streams (e.g. fruit/vegetable labels). Applications for which compostable plastic packaging is used are ideally

[12] Regions can be any geographic area (countries, states, provinces, ...), anywhere in the world

[13] Organic recycling includes composting and anaerobic digestion. Along with composting, anaerobic digestion can also be considered as a circular after-use pathway for plastics packaging, in line with ISO 18606. However, as the Foundation believes the use of anaerobic digestion is currently limited for plastic packaging as at the date of publication, this appendix focuses on composting.

[14] While the Foundation believes (based on research conducted to date) that no compostable plastic packaging is currently recycled at sufficient scale to be also 'recyclable' according to the definitions in this appendix, certain plastic packaging that is compostable and could technically be recycled, has been developed, such as packaging made with PLA, PBS and PHA. It is important for packaging aimed to be recycled and packaging aimed to be composted to be separated, so the material streams do not contaminate each other.

harmonised across the industry and clearly indicated, to avoid cross-contamination of compostable and recyclable material streams.
Recognising that compostable plastic packaging is not a blanket solution but rather one for specific, targeted applications, shifting to compostable packaging where reusable and/or recyclable alternatives would be preferred purely to achieve a commitment is not in line with the common vision and intention of the Global Tourism Plastics Initiative.
Compostable packaging needs to go hand in hand with appropriate collection and composting infrastructure in order for it to be composted in practice. Therefore, when claiming compostability in the context of a specific geographical area (e.g. on-pack recycling labels, public communications), it is important to take into account the local context and available systems in place as outlined in ISO 14021, and be in line with the local regulations that apply to such claims.[15]
Composting can take place in an industrial facility, following a controlled process managed by professionals, as well as in a collective or at home, where the process is subject to the householder's skills and other environmental conditions. The terms 'composting' and 'compostable' as referred to in this appendix mainly refer to industrial composting.

Composting

Definition: Composting
Aerobic process designed to produce compost.

Note 1 to entry: Compost is a soil conditioner obtained by biodegradation of a mixture consisting principally of vegetable residues, occasionally with other organic material and having a limited mineral content.

Source: ISO 472:2013, *Plastics - Vocabulary*.

Further explanatory note

a. Composting can take place in an industrial facility, a collective, or at home:[16]
- Industrial composting: Municipal or industrial composting is a professionally managed and controlled, aerobic thermophilic waste treatment process covered by international standards and certification schemes, which results in compost, a valuable soil improver.[17]
- Home composting: Designing packaging so that it is home-compostable means it adheres to more stringent conditions than industrially compostable packaging and increases the range of possible composting processes (both industrial and home composting). The home-composting process remains subject to the variability of householders' skills and experience, and the final product is not standardised.

Compostable packaging

Compostability is a characteristic of packaging or of a product, not of a material. As testing standards require packaging to disintegrate and biodegrade in a certain time frame, compostability is influenced not only by the material choice but also by, for example, the format, the dimensions, and usage of inks and colourants. For example,

[15] See note d. under "compostable packaging" definition.
[16] Along with composting, anaerobic digestion can also be considered as a circular after-use pathway for plastic packaging, in line with ISO 18606. However, as the Foundation believes the use of anaerobic digestion is currently limited for plastics packaging as at the date of publication, this appendix focuses on composting.
[17] European Bioplastics, Factsheet *Bioplastics – Industry standards & labels, Relevant standards and labels for bio-based and biodegradable plastics* (2017).

while a thin PLA film might be compostable, a solid block of the exact same material might not degrade fast enough to be considered compostable.

Care should therefore be taken when claiming 'compostability' for a material. When materials are referred to as compostable, it most often means that the material could be used to produce compostable items or packaging. It does not mean that all items produced using this material are compostable.

Similar to how recyclability is defined, also for compostability the Global Tourism Plastics Initiative moves beyond 'technical compostability' (i.e. meeting relevant international compostability standards) to compostability proven to work in practice and at scale.

Definition: Compostable packaging
A packaging or packaging component (1) is compostable if it is in compliance with relevant international compostability standards (2) and if its successful post-consumer (3) collection, (sorting), and composting is proven to work in practice and at scale (4).

Notes

1. ISO 18601:2013: A packaging component is a part of packaging that can be separated by hand or by using simple physical means (e.g. a cap, a lid and (non in-mould) labels).
2. Including ISO 18606, ISO 14021, EN13432, ASTM D-6400 and AS4736.
3. ISO 14021's usage of term clarifies post-consumer material as material generated by households or by commercial, industrial and institutional facilities in their role as end users of the product which can no longer be used for its intended purpose. This includes returns of material from the distribution chain.
4. 'At scale' implies that there are significant and relevant geographical areas, as measured by population size, where the packaging is actually composted in practice.

Further explanatory notes

a. As per ISO 18606, a package is industrially compostable if it meets the following criteria:
- Characterisation: identification and characterisation of components prior to testing;
- Biodegradation: conversion of at least 90% of organic carbon to CO_2 within 26 weeks under controlled composting conditions (at +58°C +/- 2°C);
- Disintegration: disintegration is considered satisfactory if within 12 weeks under controlled composting conditions, no more than 10% of the original dry mass of a package remains in the oversize fraction after sieving through a 2,0 mm sieve (at +58°C +/-2°C)
  - Compost quality: the compost obtained at the end of the process does not cause any negative effects;
  - Maximum concentration of regulated metals: it does not exceed a given concentration. of regulated heavy metals and other substances hazardous to the environment.

b. As per ISO 18606, a package is considered compostable only if all the individual components of the package meet the compostability requirements specified. If the components can be easily, physically separated before disposal, then the physically separated components can be individually considered for composting.

c. Compostable plastic can be composted in a municipal or industrial facility as well as, if it is designed to be home compostable, in a collective or at home as a complementary after-use option where relevant - *see 'Composting' definition*.

d. In line with ISO 14021 and US FTC Green claims, a marketer should clearly qualify compostability claims to the extent necessary to avoid deception, e.g. taking into account if one component is not compostable or if the item cannot be composted safely or in a timely manner in a home compost pile or device. For example, the US FTC Green guide states: "§ 260.7 Compostable Claims: "*To avoid deception about the limited availability of municipal or institutional composting facilities, a marketer should clearly and prominently qualify compostable claims if such facilities are not available to a substantial majority of consumers or communities where the item is sold*."

e. This 'compostable' definition applies at a global level for global commitments: it is a characteristic of packaging and is not linked to any local context or specific geographical area. It does not imply that it will be composted in every geographic area where it is put on the market. Local context and available infrastructure should be taken into account when claiming compostability in a specific geographic area.

In line with how 'recyclability proven in practice and at scale' was defined, the suggested test and threshold to assess if the compostability of a packaging is proven to work 'in practice and at scale' is: Does that packaging achieve a 30% post-consumer composting rate in multiple regions[18], collectively representing at least 400 million inhabitants? A possible alternative, especially relevant for more local players, is to check if a 30% post-consumer composting rate is achieved in all the markets where your packaging is sold. The above thresholds might be reviewed over time as more data becomes available.

These thresholds are not intended to be achieved today, but aim to define an ambitious yet realistic target to reach by 2025. Please refer to **Appendix V** for an assessment methodology for the compostability of packaging.

Please note: The term 'biodegradable' should not be confused with 'compostable'. 'Biodegradability' designates a property which is needed - among others - to make a package compostable. It does not indicate whether a plastic package can in practice be collected and composted following a managed process (e.g. how quickly and under what conditions it can biodegrade).

5. Take action to increase the use of recycled content across all plastic packaging and items used

In a circular economy, products and components are to be made from as much recycled content as possible (where legally and technically possible). This enables a reduced dependence on virgin (fossil) feedstocks, and creates a demand-pull for recycled plastics, sending a clear signal stimulating investments in the collection, sorting, and recycling industry.

It is important that industries with requirements for high-quality materials, such as the packaging industry, maximise the use of recycled content (keeping in mind regulatory constraints, such as food contact and health and safety regulations). Firstly, because keeping materials at their highest utility and value at all times maximises the number of possible future use-cycles of the material. Secondly, because if all plastics were to be recycled with significant quality or value loss - for example if all plastic packaging were

[18] Regions can be any geographic area (countries, states, provinces, ...), anywhere in the world (independent of where your organisation is based).

to be recycled into lower-quality applications - the '*high-quality industries'* such as packaging would remain dependent on continuous virgin material input[19].

As part of the Global Tourism Plastics Initiative, recycled content commitments aim to increase the use of post-consumer recycled content (as defined below).

Definition: Post-consumer recycled content

Proportion, by mass, of post-consumer (1) recycled material in a product or packaging.

Note

1. ISO14021's usage of term clarifies post-consumer material as material generated by households or by commercial, industrial and institutional facilities in their role as end users of the product which can no longer be used for its intended purpose. This includes returns of material from the distribution chain.

Source: ISO 14021:2016 modified, *Environmental labels and declarations — Self-declared environmental claims (Type II environmental labelling), Usage of terms,* modified (focus on post-consumer recycled material)

Further explanatory notes

- **a.** While in a circular economy it is encouraged that pre-consumer waste is kept in the system, the priority is to avoid such pre-consumer waste as part of an efficient production process. Recycled content commitments as part of the Global Tourism Plastics Initiative therefore exclude pre-consumer recycled content (ISO 14021, *Usage of terms, Recycled content:* Pre-consumer recycled content includes materials diverted from the waste stream during a manufacturing process).
- **b.** Transparency on the nature of the recycled content (i.e. post-consumer versus pre-consumer) is to be ensured whenever possible.
- **c.** As referred to in ISO 14021, the percentage of recycled material (by weight) shall be mentioned when a claim of recycled content is made, separately stating the percentage of recycled content used in products and packaging, without aggregating it.
- **d.** Amounts and quality of packaging made out of recycled content should be in line with relevant food contact and health and safety regulations where a packaging is put on the market.
- **e.** To verify or certify the use of recycled content, various verification systems from different assurance bodies exist.

6. Increase the share of renewable content from responsibly managed sources

As fossil feedstocks cannot be regenerated in any reasonable timescale, their extraction and use is a linear process and can therefore not be part of a long-term solution. Moving towards a circular economy for plastic packaging includes, over time, decoupling from finite (fossil) feedstocks. This is achieved first and foremost by drastically reducing the need for virgin plastics through dematerialisation, reuse and recycling, and then, over time, by switching the remaining virgin inputs (if any) to renewable feedstocks where this is proven to come from responsibly managed sources and to be environmentally beneficial.

[19] Virgin materials are materials that have not been previously used or subjected to processing other than for their original production. In the context of plastic, plastic that is not produced from post-consusmer or pre-consumer recycled material.

In order to avoid unintended consequences it is important to ensure for all renewable feedstock responsible sourcing and regenerative agricultural principles are applied (taking into account the impacts of the agricultural processes, including land use, and any impact on food security and biodiversity).

To the Foundation's knowledge, as at the date of publication, no comprehensive and widely accepted definition, standard or certification scheme for responsibly managed sources exists. Their development is encouraged to ensure a clear framework for related commitments and actions.

Definition: Renewable material
Material that is composed of biomass[20] from a living source and that can be continually replenished. When claims of renewability are made for virgin materials, those materials shall come from sources that are replenished at a rate equal to or greater than the rate of depletion.

Source: ISO 14021:2016, *Environmental labels and declarations — Self-declared environmental claims (Type II environmental labelling) - Sections 7.14.1. Usage of term and 7.14.2. Qualifications.*

Further explanatory note

a. ISO 14021: "An unqualified claim of renewability shall only be made when the product consists of 100% renewable material, allowing for de minimis amounts of non-renewable materials being contained in that material. Otherwise, renewability claims shall be qualified as follows:
a) where a claim of renewable material content is made, the percentage by mass of renewable material to the total mass shall be stated;

b) the percentage of renewable material content (mass fraction) for products and packaging shall be separately stated and shall not be aggregated."

Definition: Renewable content

Proportion, by mass, of renewable material in a product or packaging.

Further explanatory notes

a. The assessment of "renewable content" is done either through the direct measurement of biomass or bio-based carbon content in a product, or by a calculation. As plastic producing facilities sometimes use both fossil and renewable feedstocks at the same time, a certified mass balance approach could be applied to calculate and certify renewable content.
b. Renewable content can be made from bio-based materials (biomass or biogenic carbon), although it should be noted that bio-based materials are not always renewable.
c. Claims made on renewable content (biomass content, bio-based carbon content) should only be made in relation to the total mass or total carbon in the product.

[20] ISO 14021:2016: Biomass is defined as a "material of biological origin excluding material embedded in geological formations or transformed to fossilised material. Note 1 to entry: This includes organic material (both living and dead) from above and below ground, e.g. trees, crops, grasses, tree litter, algae, animals and waste of biological origin, e.g. manure.(modified: part on renewable energy excluded); ISO/IEC 13273-2:2015, *Energy efficiency and renewable energy sources — Common international terminology — Part 2: Renewable energy sources*, Biomass definition: Note 1 to entry: The biomass includes waste of biological origin. Note 2 to entry: The material includes animal by-products and residues and excludes peat.

d. Amounts and quality of packaging made out of renewable content should be in line with relevant food contact, health and safety regulations where packaging is put on the market.