PARTNERING FOR AFRICA’S CHALLENGE ON PLASTIC LITTER
The global community, particularly G20 members have mobilized to put a stop to the global marine plastic litter challenge. This challenge comprises of an estimated stock of 83 Mt of plastic waste that has already accumulated in oceans and an estimated 8 Mt of additional, mismanaged plastic waste entering oceans annually, at least 80% of which originates directly from land-based sources. In 2017, the G20 Leaders’ Summit in Hamburg agreed on a G20 Action Plan on Marine Litter and discussions continued at the G20 2018 in Argentina.

The Japan Presidency for G20 2019 has prioritized the global marine litter challenge and aims for the implementation of concerted action. At the G20 Osaka Summit held in June 28-29, 2019, Osaka Blue Ocean Vision to reduce additional pollution by marine plastic litter to zero by 2050 was shared. It was then announced that Japan will support developing countries’ efforts including their capacity building and infrastructure development in the area of waste management at the summit.

The problem of marine plastic litter can be addressed through implementing circular economy practices. Circular economy practices, inter alia, necessitate policy frameworks to create incentives for economic actors, such as industry, to increase the utilization of resources. This is realized by maintaining the value of the product and its materials at any point of its life cycle and avoiding premature discarding of products and/or their materials, which includes plastics. This, in conjunction with optimizing landfill management, will help to substantially reduce the amount of those plastics most likely to end up as marine plastic litter. Together with measures to tighten the management of marine based sources of marine litter, and with clean-up operations where feasible, increased plastic pollution of oceans may be stemmed and eventually prevented.

UNIDO, as a leading UN agency promoting circular economy and resource efficiency in industry, supports African countries’ challenges to deal with plastic waste leaking to the environment.
Study on available sustainable alternative materials to plastics, and innovative packaging and recycling technologies that meet market needs in Africa to reduce plastics leakages to the environment

The project will finance studies, and related consultation and dissemination activities, on identification of sustainable alternative materials to plastics, and innovative packaging and recycling technologies to meet market needs in Africa to reduce plastic leakage to the environment.

The project will conduct two study streams that will merge into one at country levels on:

a. Identification of sustainable alternative materials to plastics, and innovative packaging and recycling technologies globally, particularly in Japan.

b. Plastics value chains in the target countries and their regulatory frameworks.

By running two study streams at the same time, the outcomes would be linked so as to identify the gaps between needs and demand and supply as well as opportunities and challenges in target countries. In the course of the studies, consultation seminars and workshops will be organized to raise awareness on reduction of marine plastic litter and for matchmaking between technology promoters and their potential partners.

To this end, the project is expected to contribute to provide an overview of available technology options matching with local contexts, needs and demand in order to reduce the amount of virgin plastic usage in packaging and single-use plastic products in target African countries.

For more information, scan QR code

<table>
<thead>
<tr>
<th>AREA</th>
<th>STARTING DATE</th>
<th>DURATION</th>
<th>DONOR</th>
<th>BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>July 2019</td>
<td>24 months</td>
<td>Japan</td>
<td>€ 350,000</td>
</tr>
</tbody>
</table>
UNIDO, in partnership with the Council for Scientific and Industrial Research (CSIR), aims to support the development of an action plan to *strengthen the capacity of local industry to produce alternative materials*, and strengthen capacities for plastic recycling through integration of informal sector in the recycling value chain.

Recently, bio-degradable plastics have gained attention as one approach to deal with the scourge of plastic pollution. However, when bringing new materials onto the market, particular attention needs to be paid to ensuring that the overall environmental footprint is not increased and that new types of waste are not created that cannot be recycled and that increase the amount of waste; or that hinder efforts to increase circularity.

The project will help to assess all possible scenarios and choose *appropriate materials for South African contexts*, and will facilitate the creation of an enabling and inclusive environment for identification and implementation of appropriate solutions.

The project has the potential to *reduce plastic leakage to the environment and unlock new economic opportunities* - both of which are urgently needed by South Africa.

**EXECUTING PARTNER**
The Council for Scientific and Industrial Research (CSIR)
Department of Science and Innovation (DSI)
Benefiting from UNIDO’s extensive knowledge on Circular Economy and its service experience, the project will focus on Circular Economy perspectives and Japanese 3R principles (*Reduce, Reuse, and Recycle*), especially targeting the product design and post consumption stages by closely working with South Africa’s plastic and packaging industry, which has responsibility to recycle and reduce plastic waste under current voluntary (and pending mandatory) Extended Producer Responsibility (EPR).

**UNIDO’S approach would focus on**

a. Reviewing the state of play in single-use plastics in the country;

b. Selection of renewable, biodegradable and compostable materials as alternative primary materials, and additives that are not or less toxic for essential plastic packaging or single-use plastic products;

c. Designing for less material use to decrease waste;

d. Designing packaging and products that use a single or small number of polymers that are easy to separate during recycling.

The project consists of two components: one of which will support the identification and implementation of opportunities for sustainable alternative materials, including biodegradable plastics, and the second that will support the plastic and packaging industry in their recycling efforts by strengthening capacity and through the integration of the informal waste sector; with a view to enhance waste separation at source to increase the quality and amount of collected recyclables and to promote understanding and knowledge on new alternative materials that are of interest.
Recently, **bioplastics have gained attention as one approach to deal with plastic waste**. However, special attention is needed when adopting new materials and alternatives to ensure that they offer the best social, economic and environmental solutions, and to prevent ‘**burden-shifting**’; that is, to ensure that they are indeed more sustainable than conventional plastics. For example, biological inputs used for bio-plastics should not displace food production, and should not have a larger environmental footprint than fossil based plastic resins.

Moreover, **not all bioplastics are biodegradable and marine-degradable**, which is defined as “none of the original polymer remains after a process involving microbial action”; i.e. it has been broken down to carbon dioxide, methane and water. Even some products labelled as biodegradable, do not biodegrade at ambient temperatures, but only at temperatures higher than 50°C that industrial composting would generate. **The condition and duration of biodegradability would differ product by product**, depending on the material composition of the product and the environment that the product lays in. This is because biodegradation is **influenced by temperature, inoculum, humidity, time, and other factors**. To claim a product’s biodegradability, the ambient conditions have to be specified and a timeframe for biodegradation must be set in order to make claims measurable and comparable. This could be regulated in the applicable standards.

Another consideration is that the more widespread adoption of ‘biodegradable’ plastics would require **more effort to separate them from the ‘non-biodegradable’ plastic waste streams** that are recycled to avoid compromising the quality of the final product. The same would apply for potential contamination of compost with non-biodegradable plastic fragments. Introduction of alternatives into the market will also increase the importance of waste separation at source and require better consumer and waste picker awareness and cooperation, as well as clear labelling on products.

Therefore, when bringing new materials onto the market, particular attention needs to be paid to **ensuring that the overall environmental footprint is not increased and that new types of waste are not created** that cannot be recycled and that increase the amount of waste; or that hinder efforts to increase circularity. It has to be assessed and considered all possible scenarios and choose appropriate material for the country’s contexts, and then suggest necessary steps needed to set up an enabling environment.