



INDIAN OCEAN  
COMMISSION



## National Circular Economy Framework & Guide for Entrepreneurs for the Seychelles

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Country report

## Table of Contents

<b>Introduction</b>	177
<b>1 Policy framework</b>	178
1.1 Establish regulations for the country’s Circular Economy	178
1.2 Educate through awareness and education campaigns	178
1.3 Improve material stock management	179
1.4 Restore and better manage the use of natural flows	180
1.5 Incentivise businesses	181
<b>2 Guide for entrepreneurs</b>	182
2.1 Creating a new CE business	182
2.2 Transitioning to a CE business	185
2.3 Circular Business models for entrepreneurs	187
<b>3 Annexes</b>	189
Annex 1: Types of laws and policies in Seychelles relating to CE	189
Annex 2: Existing awareness raising initiatives and campaigns towards CE	190
Annex 3: Examples of companies doing CE related activities in waste management	190
Annex 4: Sectors to foster CE and related key stakeholders	191
Annex 5: Key examples of companies in the Seychelles operating under CE business models	192
Annex 6: Platforms or entities that can support CE-related activities	192



## Introduction

Circular economy (CE) has been on the rise across the globe due to a growing concern about resource extraction rates and pollution arising from production processes under the linear economic model. The CE is “an industrial system that is restorative or regenerative by intention and design” (EMF 2013). The CE goes beyond recycling and waste reduction as it aims to value waste and keep materials in circulation for as long as possible. It is about extracting higher value from fewer resources by increasing productivity and efficiency, and moving from ownership to access of products, creating a sharing mindset allowing to reduce consumption thanks to increased efficiency of asset use. For island states, the CE is highly relevant due to their vulnerability to climate change and pollution but also due to the reliance of countries on import of most products consumed. The Indian Ocean Commission has therefore secured funding from the World Bank to support the SWIOFish regional project and increase efforts to set up a circular economic model for the supply and production chain to reduce downstream marine pollution. The CE Project’s aim for each AIODIS country is to foster a circular economy and protect the environment and natural assets while aiming for economic growth.

The objective of the report is to present a national policy framework and guidelines for entrepreneurs. Through collaboration with local experts and government officials, local agencies and international foundations, an understanding of the current situation has been established in the review report. Possible approaches and actions have now been identified to move forward. These actions are gathered within the present document. Thanks to policy adaptations and various initiatives made throughout the past decade, the Seychelles already created the fundamentals to proceed. Involvement from the private sector, civil society and Non-Governmental Organizations (NGOs) has additionally increased the understanding of the concept of a circular economy and cornerstones have been laid within the society.

The document is divided into two parts. First, it presents a policy framework to foster CE and respective suggested legislative implementations for the Seychelles. To facilitate the connection between authorities and policies and the private sector it is important to guarantee a common understanding and the comprehension on how to proceed, with the goal of a circular economy in mind. The second part of this document then presents CE guidelines for entrepreneurs. Implementing a CE goes beyond recycling and waste reduction as it aims to value waste and keep materials in circulation for as long as possible. It encourages extracting higher value from fewer resources by increasing productivity and efficiency. Therefore, to move towards a circular economy it is crucial to involve local businesses and the private sector in order to facilitate the collaboration, implementing respective practices along the path within production, distribution and treatment facilities. The guidelines for entrepreneurs are linked to the policy framework and legislative suggestions made during the first phase. Explanations on how to set up a business in the Seychelles with a circularity target, as well as the transition toward more sustainable business practices for established companies will be included and offer step-by-step advice along the way. This will allow to close a gap of informality within different sectors and better involve authorities and businesses in the common quest toward a circular economy.

## 1 Policy framework

The framework to lay out possible paths moving forward based on the particularities of the Seychelles and feedback from the local expert participating in this work. Acting upon present circumstances in place legislation will be promoted to develop a circular economy further while aiming to identify additional opportunities to expand the economy and improve aggregate efficiency of materials.

### 1.1 Establish regulations for the country's Circular Economy

**National Policy goal:** The government needs to adopt a statement committing to a circular economy and fill the legal gaps. A number of legal texts exist in the country but they are not harmonised to address CE, comprehensively (See Annex 1).

**Rationale:** There is currently limited interaction between industry and authorities for common action. The government is yet to make its target for a circular economy known and offer a clear indication on how to follow through with it.

In the Seychelles, the polluter pays principle (PPP)<sup>1</sup> is established in the National Waste Policy with limited implementation. It is controlled and monitored by the department of environment in collaboration with the Landscape and Waste Management Agency (LWMA) and the Seychelles Maritime Security Agency (SMSA). The public sector is responsible for the financial burden of the pollution costs, and this is why the government has imposed environment levies on selected products, businesses and sectors. The Seychelles has not put in place the Extended Producer Responsibility (EPR)<sup>2</sup> along the supply chain in all sectors to prevent extensive pollution and reduce the impact on PPP. EPR and PPP are generally recognised in the legislation about waste management. Despite the existence of the PPP and due to the lack of EPR, there is no Circular Economy Policy or no strong CE basis yet that can reduce different forms of pollution and in particular marine pollution.

**Specific actions needed:** To achieve the above goal, it is suggested that the country adopts a declaration or an umbrella legislation that promotes integration of actors and harmonisation actions towards a CE. Commitment to the CE could be integrated into existing social, economic and other sector policies of the country.

There is a need to adopt specific legislations that are currently missing to foster a CE. These legislations include texts on EPR. Implementing policies relating to the Blue Economy Roadmap also represent key opportunities to integrate circular economy principles.

### 1.2 Educate through awareness and education campaigns

**Mobilising actors for the CE:** To achieve a CE in the Seychelles, it is essential to increase literacy on CE at all levels, especially in key sectors such as the blue economy. The Concept of CE is still new at the national level, the population and governmental departments have not fully explored the potential and benefits of this sector. However, there are small and scattered CE related projects initiated by the private, civil society and the NGOs. They are mainly addressing nature conservation rather than commercial practices.

<sup>1</sup> The Polluter-Pays Principle means that the polluter has to bear the cost of steps that he is legally bound to take to protect the environment, such as measures to reduce the pollutant emissions at source and measures to avoid pollution by collective treatment of effluent from a polluting installation and other sources of pollution (OECD 1992).

<sup>2</sup> The Extended Producer Responsibility is a policy approach under which producers are given a significant responsibility – financial and/or physical – for the treatment or disposal of post-consumer products (OECD 2001).

**Rationale:** There are efforts from the government, civil society or private companies to sensitise population through agencies but the outreach or geographical coverage have often been limited.

**Specific actions needed:** To achieve the above goal, there is a need to support and replicate existing initiatives and other educational activities in place at the level of government, businesses and the local community. In the Seychelles, more vigorous awareness campaigns about the CE that have started are very recent and can be seen in the sectors of tourism, agriculture and fisheries, which are the main pillars of the economy. These sectors are also the principal waste generators and polluters. (see Annex 2).

Key examples of specific actions needed include:

- Continued workshops in place engaging society at large.
- Build stronger collaboration between large industrial partners and authorities.
- Reintroduce school campaigns or incorporate it in the curriculum to raise awareness within youth.
- Increase interaction with companies to introduce them to circular economic models and make them understand the necessity of it.
- Develop a raising awareness policy or guide on CE
- Facilitate access to credit for CE projects and programmes

## 1.3 Improve material stock management

### 1.3.1 Collection and sorting system

**Optimising Waste value:** To improve waste management processes currently in place, it is recommended to optimise existing collection and sorting systems. This is also acknowledged in the report on Marine plastic under the AIODIS project. While waste is collected, it is not done uniformly across the country. Waste sorting procedures are not efficient and do not allow an efficient valorisation of waste.

**Rationale:** Waste is collected six times a week through containers, kerbside collection and household collection. After collection, waste streams are not always sorted into different materials such as metal, electronics, paper & cardboard bio waste, plastic etc. Collection and transport of waste are the responsibility of the government in all public places (include household wastes deposit in roadside bins). The collection and disposal activities are outsourced to the private sector organisations. However, industries and businesses are required to have provisions in place to collect and dispose of waste at their premises and areas of their operations at their own costs. This is usually part of their licensing conditions.

**Specific actions needed:** From the above and due to increasing waste production, it is then necessary to increase collection points and collection capacity, improve sorting procedures and introduce a treatment site that is more sustainable than landfill. The landfill in its current form is exposed to create more toxic pollution and prone to fire outbursts. An important step in this process is to support existing companies doing collection and sorting and replicate nationally. Current companies exist that responsibly collect and sort waste (See annex 3).

### 1.3.2 Waste treatment facility

**Improving efficiency of waste treatment sites:** Addressing processes at waste treatment facilities represent a key step towards achieving circularity. To do so, the country needs to increase efficiency of current facilities and introduce more sustainable sites like landfill with gas congestion, incineration with energy recovery, waste sorting and cleaning sites, recycling stations. Existing facilities do not allow valorisation of waste and do not achieve their goals of reducing waste.

**Rationale:** The government has started discussion to replace current landfill sites. Options to open incineration plants or landfill with anaerobic digestion as well as recycling plants are being evaluated by the authorities. Efforts to implement waste sorting, to increase waste collection, to reduce littering and to introduce recycling are undertaken. This was given a boost following a comprehensive study to sort out waste by a German Team from University of Darmstadt in 2016.

**Specific actions needed:** To achieve circularity, existing solutions include implementing high efficiency recycling and biogas creation.

For the Seychelles, options include creating new companies as well as supporting and upscaling existing companies treating waste with circular motives. Current companies that have existing waste valorisation processes are limited in facilities, technology and in what they can re-use and recycle for economic value. (See annex 3).

### 1.3.3 Dumping and littering

**Reducing pollution through improved waste management:** For the country's blue and circular economy, reducing waste and related pollution at all levels and especially in the ocean and along the coast is paramount. There is currently an important level of industrial pollution and accumulation of waste from littering in the districts, on different islands and on beaches.

**Rationale:** In the Seychelles, the National Waste Policy establishes anti-dumping and littering. Related legislations and fines are in place. A body of control is in place and operated by the public sector and responsible for monitoring company waste streams. Industrial dumpsters are supervised by the department of environment, and SMSA is mandated to regulate ocean and sea waste pollution.

**Specific actions needed:** It then becomes obvious that the country needs to better monitor industrial waste and reinforce the implementation of fines, introduce material use understanding across sectors such as tourism, fisheries or agriculture.

For the Seychelles, the solution lies within supporting existing program for industrial waste monitoring and a subsequent, enforcing the implementation of the penalty system.

## 1.4 Restore and better manage the use of natural flows

**Managing natural resources:** To achieve a sustainable use of natural resources within a CE, the Seychelles needs to upscale and further support existing initiatives. They aim at regenerating natural flows especially in the blue economy sectors such as fisheries, tourism, oil and gas exploration and bioprospection. The Seychelles has committed to protect 30% of its EEZ which will increase environmental protection of marine and coastal ecosystems. While there is a wide range of environmental texts, there are also high levels of biomass extraction through fisheries for example.

**Rationale:** There are agencies but limited research centres in place responsible for the monitoring of natural resources such as fish stocks, forest abundance, wildlife preservation and water pollution. As a follow-up on existing monitoring efforts of natural resources, there are limited controlling efforts like implementation of resource use permits.

**Specific actions needed:** Available solutions include increasing protection of EEZ through MPAs, reinforcing monitoring of existing MPAs and areas-based management, and increasing restoration activities.

The next step for the Seychelles could be to improve existing monitoring practices and capabilities. Building better knowledge on the use of natural resources will provide evidence for future resource extraction decision-making. To address regeneration of natural flows, a parallel step is to support and upscale existing activities such as fishery management plan such as restriction on license period or capping annual catch of vulnerable species, mangrove restoration, locally managed marine areas and MPAs.

## 1.5 Incentivise businesses

**Putting businesses at the centre of the CE:** Increasing the involvement of businesses and entrepreneurs is a stepping stone towards achieving circular and blue economy activities. Businesses and entrepreneurs are not aware of the opportunity the CE presents. Those already involved in CE related activities are not well supported.

**Rationale:** The public sector is not fully aware of private sector initiatives and efforts toward a circular economy and does not effectively monitor circular business practices. The government has provided limited incentives for a circular economy within businesses by supporting them financially through aids, tax incentives and operative advice.

The current existing governmental monitoring of business practices and the understanding of circular efforts allows there to be limited grouping of companies according to equipment, material use and production practices to allow for a closed loop or industrial collaboration.

**Specific actions needed:** In the Seychelles, existing initiatives of aids, tax incentives and operative advice need to be more attractive and better promoted amongst businesses.

To promote the adoption or transition to a CE business, the government also needs to provide structural and financial support to businesses including through:

- The creation of a circular economy office within one or several of the government departments
- The creation of company grouping according to business activity, material use, equipment requirements and proximity to improve material use and infrastructural efficiency while reducing supply chain and waste treatment costs by sharing them among a group of firms
- Undertaking a dialogue with industry to create valorisation of waste materials
- Introducing tax relief schemes such as 3-5 years starting period complete tax-free or reduced
- Cutting repair and refurbish value-added tax to encourage reuse businesses



## 2 Guide for entrepreneurs

To implement a circular economic model within businesses and across sectors through synergies both governmental and private sector efforts are required to create the right environment. Since private sector actors are able to decide and act quickly, companies can be the driving power toward a local circular economy. Businesses are currently in the position where they can drive the change by taking initiative and transition toward circular economic practices and influence governmental decisions on the matter to follow accordingly.

In order to engage businesses in efforts to achieve a circular economy, it is necessary to provide them with guidelines on how to set up and transition toward a circular production cycle. Through consultation of local experts and governmental officials this document pinpoints to existing good practices as well as barriers and opportunities for a circular economy. Feasible solutions and possible stakeholders to become involved in the process have been identified and the guidelines are designed to create discussion across sectors to form synergies and break the linear economic model. Identifying and pointing out possible company collaborations as well as step-by-step guidelines for sustainability seeking businesses are starting points towards the final goal of protecting maritime resources and reducing ocean pollution.

The guidelines can help start-ups as well as existing companies to establish business models that allow for more efficient resource management while phasing out waste creation and thereby counteract maritime pollution at its source. The guidelines offer upcoming entrepreneurs administrative advice to set up their business and identify the main modalities of implementation for a circular economy. For existing businesses, the guidelines include step-by-step council on how to transition toward sustainable production and system processes that are associated with a circular economy. The guidelines conclude with in-depth solution proposals and opportunities for companies to pick up upon and implement in their ongoing quest for sustainable processes. Based on the content of this document companies will be able to make relevant progress leading to improved resource management, reduced waste generation and diminished maritime pollution.

### 2.1 Creating a new CE business

#### 2.1.1 Establish the mission, vision and objectives of the company

The company's mission must embody its essence and reason for being. The vision comes as the way the company is envisioned in the mid-long term. Objectives of the company derive from the founders' goals (personal and professional motivations) and should tackle environmental and social challenges, and to satisfy customer needs.

For a CE business, these three elements should refer to one of the CE principles: (1) preserve and enhance natural capital by controlling finite stocks and balancing renewable resource flows, (2) optimise resource yields by circulating products, components, and materials at the highest utility at all times in both technical and biological cycles, and (3) foster system effectiveness by revealing and designing out negative externalities.

In the Seychelles, the fishery, agriculture, services, manufacturing and the construction sectors have been identified as key sectors. They offer the most impactful and far-reaching opportunities to reduce maritime and land pollution and introduce circularity in the Seychelles.

## 2.1.2 Identify key stakeholders and customer segments

This step involves identifying and prioritising those stakeholders that will play a significant role in achieving the objectives of the project. Stakeholders include the team (co-founders and employees), partners, beneficiaries and customers (beneficiaries are those who benefit from the value the project generates). Customers are at the core of the business model as they buy the services or products. The project's main impact in society has to be intrinsically linked to the local community and cover a local demand that is to be met. Another task is to develop a sound understanding of our potential customer base (customer identification and profiling) and the existing market around it (market assessment).

To promote a CE in the Seychelles, it is essential at this stage to include stakeholders like governments, civil society organisations promoting CE, institutions like the Ellen MacArthur Foundation. To identify key stakeholders, entrepreneurs should target main suppliers, intermediaries, processing associates as well as customers and public partners of interest. In the above identified sectors of fishery, agriculture and manufacturing, some key stakeholders are essential (Please refer to Annex 4).

## 2.1.3 Develop the value proposition

CE businesses create environmental value by tackling circularity and environmental challenges (that is a key driver for their existence) through their business solutions and operations. They create social value by empowering their stakeholders (including employees, suppliers, communities and future generations) and meeting the needs of their customers.

To achieve this, it is suggested to create strong collaboration across the board and involve customers and stakeholders in the process of designing and delivering the value proposition (through co-creation).

In the Seychelles, the issue(s) of marine pollution, excess waste generation, missing waste responsibility, extensive resource extraction and the lack of locally accessible material inputs. represent key challenges that will be a good value proposition.

## 2.1.4 Identify the modalities of implementation

### 2.1.4.1 Key activities and resources

Key activities define what we must do in order to define and offer a value proposition to a specific customer segment. They include problem-solving (such as consulting or counselling), production (manufacturing etc), platform/network/sale, and supply chain management.

Activities within CE businesses should include those proposed in the different business models (in section 4 of these guidelines).

Key resources represent all the elements and aspects that are essential for making the business work properly. They include human resources, physical assets, intellectual resources, financial resources and natural resources. For the latter, a special focus should be on the use of recycled materials, sustainable or renewable resources as input materials.

Entrepreneurs also need to consider required legislative changes in the Seychelles such as laws on EPR. At this stage it can also be helpful to enquire for possible governmental support like tax incentive schemes, access to credits, access to land infrastructure and investment subsidies.

#### 2.1.4.2 *Customer relationships and channels*

Different types of relationships can be established with customers such as personal assistance, self-service, automatic service, community based or co-creation.

To properly establish the different types of relations with customers, doing a customer journey map of the particular segment of customers can be useful. A map is an oriented graph that describes a user's journey by representing the different touchpoints that characterise his/her interaction with the service or product.

You will also have to distinguish between the way (channels) to get the customer's attention and how to establish and maintain a close relationship with them. Channels include all means of communication and distribution to reach customers and deliver a value proposition to them.

For CE businesses in the Seychelles, it is possible to explore existing initiatives towards sharing economies, introduce take-back options for customers to return products and help materials stay within company while exploiting options to continue to interact with customers.

#### 2.1.4.3 *Cost structure*

It is important to carefully classify costs (fixed and variable costs) so that the business can analyse and improve its performance.

Within a CE, it is useful to explore potential costs linked to niche CE areas and identify cost savings arising from CE practices such as equipment sharing, recycled material purchases or supply and transport costs from abroad.

#### 2.1.4.4 *Revenue streams*

The business must have an accurate idea of the importance of each revenue stream and which one best matches a particular customer segment and channel. Streams might include asset sale, usage fees, subscription fees, licensing, etc.

### 2.1.5 **Test the product or service**

Before fully implementing the modalities above, the entrepreneur needs to test key variables:

- Problems and needs identified should be tested by talking to experts in the field or by interviewing key stakeholders.
- Participation of key stakeholders should be verified through diverse types of consultations and meetings on the business objectives where multiple stakeholders can provide a good measure of their willingness to engage.
- Customer segments should be validated through focus groups, interviews, debate or conversations to check their needs, aspirations, gains and pains, etc. Focus groups, interviews, debates, and conversations could be used including on social media.
- Value proposition needs to be tested by building a prototype at small-scale or semi-functional versions of the services/products. Here, participants' reaction to the test might include satisfaction level, feedback, and curiosity/ demand for more.

Once hypotheses on the different variables have been tested and validated, the service/product has to be scaled up from prototype to the optimal market size where viability is attained. To test the circular product or service, the business can mobilise existing platforms for entrepreneurs and green products such as FBOA<sup>3</sup>, SHTA<sup>4</sup> and SCCI (please refer to Annex 6 for more details).

### 2.1.6 Mobilise tools for implementation

When the business model is validated, implementation of the modalities presented above can be facilitated by various tools. **First** is establishing a financial plan with income statements, balance sheets and cashflow projections, and a funding plan identifying traditional investors and banks as well as other funding mechanisms such as crowdfunding, financial cooperatives, micro-credits, ethical banks. **Second** is having a legal management plan to choose the best-fitting legal form according to the needs and business model. **Third** is setting a roadmap to foresee the progress of the business from year 0 to the medium and long-term. **Fourth** is to have an operation and management plan which dictates how operations are performed and managed by staff and by assigning roles and responsibilities and setting a schedule. Tools used need to be adapted according to the CE business model adopted.

To find the appropriate tools, entrepreneurs can refer to existing governmental departments and companies that provide assistance to businesses such as the Seychelles Fishing Authority, the Department of Tourism, the ESA and the SNPA. (Please refer to Annex 4 for more details).

### 2.1.7 Measure impacts and improve

Effectively measuring environmental and social impacts is essential to CE businesses. In addition to measuring how the business is doing regarding the achievement of objectives and mission, environmental indicators are needed to assess environmental performance. Environmental indicators should be used such as water consumption, material use, waste generated per service or product, or other CE related indicators. Constantly improving the business is key to achieve the circular economic objectives. Common areas of improvement include levels of participation of stakeholders, communication and marketing to incentivize customers, improve environmental performance, ensure green procurement and increase environmental awareness amongst the public.

## 2.2 Transitioning to a CE business

### 2.2.1 Map your impact and set priorities

Learn how to bring together an internal “sustainability team” to set objectives, define targets, review your environmental impact and decide on priorities. In this process, you need to evaluate impacts regarding natural flow use and material stock management. In the Seychelles, key environmental impacts of the economic sectors include marine pollution, waste generation, loss of biodiversity including animal species loss.

<sup>3</sup> Fishing Boat Owners Association (a legal entity but not all boat owners are members of this association)

<sup>4</sup> Seychelles Hospitality and Tourism Association (regroups the tourism sector service providers)

### **2.2.2 Choose indicators and understand data needs**

Identify indicators that are important for your business and learn about what data should be collected to help drive continuous improvement. To assess the circularity of your business, you can use CE related indicators such as: use of renewable energy, greenhouse gas intensity and energy intensity, intensity of your residuals, releases into the air and water.

### **2.2.3 Measure inputs used in production**

Identify how materials and components used into your production processes influence environmental performance. Businesses can also measure CE related performance including: material consumption, resource extraction, renewable energy consumption, waste generation, import of inputs, non-renewable materials, restricted substances, recycled or reused materials. Businesses can check the availability of recyclable materials and monitor availability of waste materials/recycled materials as inputs into production process.

### **2.2.4 Assess the operations of your facility**

Consider the impact and efficiency of the operations in your facility. Residual waste generation and excess material that can be phased out and managed more efficiently going forward (e.g. water consumption, energy intensity, greenhouse gas generation, emissions to air and water, waste generated). Efforts to improve production and material use efficiency toward circularity while reducing waste creation must be ongoing.

### **2.2.5 Evaluate your products**

Identify factors such as energy consumption in use, recyclability and use of hazardous substances that help determine how sustainable your end product is. Businesses can use CE related indicators such as: recycled/reused content of your products, recyclability of your products, renewable materials used in your products, Non-renewable materials used in your products, restricted substances contained in your products, energy consumption in using your products, greenhouse gas emissions from the use of your products. You can also evaluate the possible incentives to recycle and engage customers to return products to possibly keep materials in cycle.

### **2.2.6 Understand your results**

Learn to read and interpret your indicators and understand trends in your performance. Businesses can focus on CE related indicators that align with business models suggested.

Entrepreneurs and businesses can refer to existing governmental departments and companies that can provide assistance in this process such as the Public Utilities Corporation (PUC), the Seychelles Energy Commission, the Seychelles Climate Change Agency, the LWMA (Landscape and Waste Management Agency), the SBS (Seychelles Bureau of Standards), the SNPA (Seychelles National Parks Authority), the SFA (Seychelles Fishing Authority) and the Department of Environment.

### **2.2.7 Take action to improve your performance**

Choose opportunities to improve your performance and create action plans to implement them. CE businesses should focus on CE related indicators that align with business models suggested, and stay up to date with new arising sustainable opportunities and drive ongoing progress by pinpointing areas of improvement or non-circular practices.

## 2.3 Circular Business models for entrepreneurs

### 2.3.1 Circular design

This CE model relies on the following elements:

- Circular **product design**: use recyclable materials for goods and packaging that allow for a circular system and **local supplies** at a maximum
- Product/service design and provision: **access over ownership** and product service systems
- Local supplies and local demand for service/good
- **Economy of functionality** (rent resources rather than buy and own them)

There are companies that operate based on some form of circular design though their operations are not formally classified as CE. A number of them are illustrated in Annex 5.

### 2.3.2 Optimal material and resource use

To adopt this model, the following activities can be undertaken:

- **Understand value** of waste materials and engage in opportunities from materials
- **Buy recycled materials** and reduce input material costs
- **Target recyclable and sustainable materials** and pioneer in industrial waste valorisation
- **Introduce industrial symbiosis**; internalise a maximum of production steps within the company on the same site to reduce transport costs. This also helps with waste creation as all accrues on the same site, making recycling or reusing easier since larger amounts hold more potential
- **Redefine retail**; skip retailers by directly interacting with consumers. Simplifies recycling practices, understanding of consumer behaviour and increases revenue
- **Inspect daily practices** to identify non-sustainable production practices such as use of single use plastics, equipment and garment
- **Adopt a closed-loop process**; use residual outputs and by-products as input for other production processes
- **Set up internal target rates** to increase recycling rates and encourage sorting to improve employee understanding of a circular economy and its benefits

There are very few companies that optimised resource use by functioning solely with renewable and recycled materials as input. They are illustrated in annex 5.

### 2.3.3 Value recovery

This CE model relies on the following elements:

- **Reuse and recycle**: Introduce ways to keep waste materials within the company and the production cycle; Increase material use efficiency
- **Repair and recondition**: produce goods and services to last (quality over quantity) and provide service to repair and refurbish products and services

- **Remake** products that did not meet standards and were considered waste
- **Consumer awareness:** inform customers of recycling and repair opportunities to incentivize closed-loop material use while explaining competitive advantage of your service/product compared to non-circular business models

There are very few companies that maximise the utility and value of some of their materials within their production cycle and reach higher production process efficiency leading to a minimized waste creation, as illustrated in annex 5.

#### 2.3.4 Collaborative economy

To adopt this model, the following activities can be undertaken:

- **Group businesses** that use similar materials to share transport supply costs and open channels to trade materials between firms
- **Foster cooperation;** exchange good practices and learning experiences between companies to accelerate transition toward circularity
- **Introduce a sharing economy:** collaborate with other businesses to build expensive infrastructure or purchase equipment to improve efficiency of usage (ex; cooling units, trucks, sorting site, ...)

There are very few companies that operate on the basis of a collaborative economy and exploit all potential side products and collateral uses that accrue during their production. Additionally, equipment and material sharing are maximised through excessive industrial networking (Please refer to Annex 5 for key examples).

### 3 Annexes

#### Annex 1: Types of laws and policies in Seychelles relating to CE

<b>Renewable Flow Management</b>	Environmental protection/ Biodiversity Conservation	✓	Environment Protection Act 2016 (No. 18 of 2016) (2016) Petroleum Mining (Pollution Control) Act (1976 then 2012) Wild Animals (Whales Shark) Protection Regulation (2003) Seychelles' National Biodiversity Strategy and Action Plan 2015-2020. (2015) 2012–2020 Seychelles Sustainable Development Strategy The Blue Economy Strategic Policy (Road Map) 2018-2030
	Fisheries management	✓	Fisheries Act (No. 20 of 2014). (2014) Fisheries Sector Policy and Strategy 2019 (2019)
	Forestry management	✓	Forest Reserve Act (1976)
	Protected Areas	✓	National Parks and Nature Conservancy Act (1986) Seychelles' Protected Areas Policy (2013)
	Water management	✓	Seychelles Water Supply Development Plan 2008-2030
	Renewable Energy	✓	Energy Act, 2012 (Act 11 of 2012) Proposal for Energy Policy of the Republic of Seychelles, 2010 – 2030
<b>Stock Management</b>	General waste management	✓	Seychelles National Waste Policy 2018-2023)
	Solid waste management	✓	Solid Waste Masterplan for Seychelles (2020-2035)
	Recycling	✓	Seychelles National Waste Policy 2018-2023
	Plastic Bag Ban/ Phase out	✓	Environmental Protection Act 2016 prohibiting the import, manufacture, distribute, or sell of Plastic bags, plastic utensils, and polystyrene boxes



## Annex 2: Existing awareness raising initiatives and campaigns towards CE

Initiative name	Description of activity	CE aspect addressed	Contact
LWMA Clean-up campaign	Periodical clean-up campaign involving the public	Waste reduction	Landscape & Waste Management Agency Address: PO Box 1153, English River, Mahe Phone number: +248 432 43 34 Fax: +248 461 06 46

## Annex 3: Examples of companies doing CE related activities in waste management

CE aspect	Company	Description of activity	Link or Contact
Collection	WASTE A	Collection of different types of waste	<a href="http://www.wastea.sc/waste-management-services-seychelles/">http://www.wastea.sc/waste-management-services-seychelles/</a>
Sorting	<ul style="list-style-type: none"> <li>METALUCO</li> <li>SAMLO</li> </ul>	Collection, processing and exporting of scrap metals, plastic and car batteries	<ul style="list-style-type: none"> <li>METALUCO PTY LTD, Avenue D'Arhoa, Providence Industrial Estate Address: P.O. Box 247, Mahe, Seychelles, Email: <a href="mailto:metaluco@seychelles.sc">metaluco@seychelles.sc</a></li> <li>Samlo &amp; Sons, Providence Industrial Estate Email: <a href="mailto:samlogroup@intnet.mu">samlogroup@intnet.mu</a>. Phone number: +248 51 69 18</li> </ul>
Treatment	LWMA	Crushing and disposing	Landscape & Waste Management Agency Address: PO Box 1153, English River, Mahe Phone number: +248 432 43 34 Fax: +248 461 06 46
Recycling and disposal	<ul style="list-style-type: none"> <li>SoScience</li> <li>METALUCO</li> <li>SAMLO</li> </ul>	Conversion of plastic into oil Exporting scrap metal and car batteries	<ul style="list-style-type: none"> <li><a href="https://www.soscience.org">https://www.soscience.org</a></li> <li><a href="mailto:metaluco@seychelles.sc">metaluco@seychelles.sc</a></li> <li><a href="mailto:samlogroup@intnet.mu">samlogroup@intnet.mu</a>.</li> </ul>

## Annex 4: Sectors to foster CE and related key stakeholders

Key sector	Identified key stakeholders	Relevance of the stakeholder
Fisheries	SFA	Monitors the fish stocks and issues licenses
	FBOA	Coordinates local fishers
	Department of Blue economy	Coordinates sustainable use of marine resources across sectors
Tourism	Seychelles National Parks Authority (SNPA)	Regulates and maintains the marine parks
	Department of Environment	Responsible for policy issues, plans and strategies for the environment
	Department of Tourism	Responsible for policy issues, plans and strategies for tourism
	Seychelles Hotel and Tourism Association (SHTA)	Coordinates and represents local hoteliers and other service providers in tourism
Manufacture	Seychelles Licensing Authority (SLA)	Delivers licences and ensures operational compliance
	Seychelles Chamber of Commerce and Industry (SCCI)	Coordinates and be central representative of the local business communities
	Seychelles Bureau of Standards (SBS)	Sets and safeguards quality and standards
	Enterprise Seychelles Agency (ESA)	Coordinates and supports the development of micro and small enterprises/businesses
Agriculture	Seychelles Agriculture Agency (SAA)	Enhances the national food and nutrition security and to provide goods and services to the food producing entrepreneurs.
	Seychelles Farmers Association (SEYFA)	Self-empowerment for a more profitable and sustainable agriculture, and strengthening the place of farmers in the food chain. To organise, promote and develop farming at all levels in Seychelles

## Annex 5: Key examples of companies in the Seychelles operating under CE business models

Business model	Company	Activity	Website link or Contact
Circular design	Seychelles Breweries	Implementing a returnable glass bottle scheme to be recycled and reused	<a href="https://www.diageo.com/en/our-business/where-we-operate/africa/seychelles-breweries/sustainable-development/">https://www.diageo.com/en/our-business/where-we-operate/africa/seychelles-breweries/sustainable-development/</a>
Optimal material and resource use	Indian Ocean Tuna	Implementing a tuna fish processing that uses the whole fish including oil extraction from heads and animal feed from wastage	<a href="http://www.thaiunion.com/en/about/company/subsidiary/350/indian-ocean-tuna-limited">www.thaiunion.com/en/about/company/subsidiary/350/indian-ocean-tuna-limited</a>
Value recovery	Ocean Basket and JHL Group (Pty) Ltd in collaboration with purse seiners and other local fishermen	Processing by-catch from tuna vessel into fillet, steak, salted	<a href="https://www.facebook.com/Ocean-Basket-pty-ltd">https://www.facebook.com/Ocean-Basket-pty-ltd</a> <a href="https://www.facebook.com/Amirante-Fisheries">https://www.facebook.com/Amirante-Fisheries</a>
Collaborative economy	SAMLO and in collaboration with LWMA and other waste generating commercial sectors	working with local and foreign partners to export waste like scrap metals and car batteries	Contact SAMLO: samlogroup@intnet.mu. Phone number :+248 251 69 18

## Annex 6: Platforms or entities that can support CE-related activities

Name of entity	Website
Enterprise Seychelles Agency	<a href="http://www.esa.gov.sc/">http://www.esa.gov.sc/</a>
Seychelles Bureau of Standards	<a href="https://sbs.sc">https://sbs.sc</a>
Seychelles Chamber of Commerce and Industry	<a href="http://www.scci.sc">www.scci.sc</a>
Seychelles Hospitality and Tourism Association	<a href="http://www.shta.sc">www.shta.sc</a>
Seychelles Licensing Authority	<a href="http://www.sla.gov.sc/">http://www.sla.gov.sc/</a>
Seychelles National Parks Authority	<a href="http://www.snpa.gov.sc">www.snpa.gov.sc</a>
Sustainability for Seychelles	<a href="http://www.s4seychelles.com/">http://www.s4seychelles.com/</a>
The Fishing Boat Owners Association	<a href="http://www.seychelles-hookandline-fishermen.org">www.seychelles-hookandline-fishermen.org</a>
Yes consulting	<a href="https://bit.ly/3x9a3HN">https://bit.ly/3x9a3HN</a>

