



# Report

## Circular Economy

*Opportunities and risks for Dutch companies in the Panamanian circular economy sector*

### Conclusions and opportunities

- **Circular economy** in Panama is still in the **initial stage of development**, and there is no culture of circular economy yet in Panama;
- Panama currently is lacking an effective legal framework resulting in sufficient policies for climate change action, and therefore circular economy;
- **Opportunities** for Dutch companies can be found in the sectors of water, waste-industry, urbanization, tourism, and the financial sector;
- **Risks** include insufficient political will amongst policy-makers, and inadequate funding and/or economic instability;
- **Recommendations** are knowledge-sharing, engaging stakeholders, and develop innovative and unique business cases for Panama.



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## 1. Introduction

Globally, the relatively new concept of 'circular economy' has gained momentum. Proponents of circular economy state that designing the economy in a circular way, as opposed to a linear design, helps reduce and prevent pollution. Achieving a more sustainable economy not only tackles environmental degradation, but also addresses the issue of future resource scarcity. Circular economy is especially linked with economic yields in added-value chains, but the concept is also being applied to, for example, the construction industry where infrastructure is being designed to be repurposed or even rebuild several times before final disposal.

Now, circular economy has been embraced by the central government of the Netherlands. It has set out the ambitious goal of a waste-free Dutch economy by 2050<sup>1</sup>, and this means that the transition to a circular economy is being encouraged and facilitated at a large scale, providing ample opportunities for Dutch companies and entrepreneurs to come up with innovative solutions that help achieve a waste-free economy. Building on and with this favorable economic climate, companies in the Netherlands are internationally accredited with expertise in the circular economy sector, due to their role as frontrunners. Naturally, these companies and entrepreneurs want to export their knowledge to other countries such as Panama, where progress with regards to circular economy or sustainability in general remains lackluster, despite overall good intentions.

The aim of this sector report is in the first place to **identify opportunities and risks** in Panama for Dutch circular economy stakeholders, and in the second place to give an **overview of the circular economy sector in Panama**. After this short introduction, firstly a country profile is given on Panama focusing on the institutional

framework in place that could potentially affect the trend of the sustainability sector in the country. Secondly, the current state of the circular economy sector is addressed, exploring the current trends, government initiatives, and on-going projects. Thirdly, an analysis of potential risks and opportunities in Panama for Dutch companies specialized in circular economy is given, with the aim of creating understanding of Panamanian needs and bottlenecks. This report will draw on primary literature, such as government laws and reports, as well as first-hand experiences in dealing with both the private and public sector in Panama, meaning talks and meetings with Panamanian entrepreneurs and companies, and government officials.

## 2. Panama profile

### 2.1 General information

Over the years, the Panamanian economy has been marked by high growth. After the global recession in 2009, the annual growth rate of the Gross Domestic Product (GDP) averaged 6.5% in the years between 2010 and 2018, with the growth rate peaking in 2011 at 11.3%.<sup>2</sup> Its favorable geopolitical position, and its highly strategic interoceanic waterway, the Panama Canal, mean that Panama is regarded as logistical hub. Moreover, private investments as well as foreign direct investments have been high due to the open business climate in the country. Coupled with strong public investments, Panama has gained momentum over the last years. Recently, an expansion to the Canal has been constructed, providing the opportunity for larger cargo ships, as well as more cargo ships passage through the waterway, safeguarding future income. This is substantial as the Panamanian economy is largely based on services,

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<sup>1</sup> <https://www.government.nl/topics/circular-economy/circular-dutch-economy-by-2050>

<sup>2</sup> <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2018&locations=PA&start=2008>

- Panama has a GDP of **USD 65.055 billion** in 2019, with an annual growth of **3.67 %** in the same year
- Panama ranked **66<sup>th</sup>** in the **2019 Global Competitiveness Index**
- Panama ranked **86<sup>th</sup>** in the **2019 World Bank Doing Business Index**, ranking **7<sup>th</sup>** in Latin America and the Caribbean
- Panama ranked **56<sup>th</sup>** in the **2018 Yale Environmental Performance Index**

including the logistical sector, and therefore Canal related services. Other sectors in services are the financial sector, ship registry, and tourism. The service sector accounts for as much as approximately 65% of GDP, while the industrial sector and the agricultural sector trailing behind, with respectively around 30% and 2%, in 2018.<sup>3</sup>

However, the high and stable growth has not reached all levels of society, as Panama continues to be among the countries in South and Central America with the highest income inequality.<sup>4</sup> Furthermore, although the focus on economic development can be regarded as successful, the environmental consequences related to development in Panama are only recently brought to the attention. Environmental degradation and climate change are relatively new concepts in Panama, and issues are now starting to appear. Currently, the Canal is trying to tackle shortcomings in its freshwater supply due to limited rainfall, arguably the result of climate change. In the future, environmental degradation is expected to have more implications on energy, water, and human security. In general, the population, the private sector, and the public sector seem to be aware of current environmental issues, in line with the increasing environmental awareness globally, however, real progress is yet to be made on a substantial scale. In this sense, circular economy has the potential to be of immense value,

provided the current positive trend of environmental awareness is continued in the future.

## 2.2 Institutional Framework

Below is a list with Panamanian (semi-)public institutions that are in some way relevant to sustainability in Panama, and therefore also relevant for potential circular economy initiatives. What is important to note, is that not one institution or organization is solely responsible for circular economy policies. These stakeholders are listed with high, medium and low importance, in reference to how much capabilities they have to affect the trend of sustainability in Panama. To illustrate, the Ministry of Environment (MiAmbiente) has an executive role in sustainable policies set out by the government, but also an organization such as the Industrial Union of Panama (SIP) has importance in organizing a joint stance of industrialists in Panama.

### High importance

- Ministry of Environment (MiAmbiente)
- Authority for Urban and Household Waste (AAUD)
- Ministry of Agricultural Development (MIDA)
- Ministry of Commerce and Industries (MICI)
- Industrial Union of Panama (SIP)

<sup>3</sup> <https://www.statista.com/statistics/454648/panama-gdp-distribution-across-economic-sectors/>

<sup>4</sup> <https://data.worldbank.org/indicator/SI.POV.GINI?locations=PA>

#### Medium importance

- National Authority of Public Services (ASEP)
- National Council of Private Businesses (CONEP)
- Municipality of Panama-City (MUPA)
- Institute of National Aqueducts and Sewers (IDAAN)
- National Council of Water (CONAGUA)
- Ministry of Public Works (MOP)
- National Council for Sustainable Development (CONADES)

#### Low importance

- Panamanian Association of Business Executives (APEDE)
- Panamanian Association of Exporters (APEX)

### 3. Current state of circular economy

#### 3.1 Current developments

Although some environmental awareness is on the minds of the public and government officials, sufficient progress is yet to be seen in the country. Circular economy is far from being embraced by the Panamanian government, when comparing its policy to its Dutch counterpart, and this can have implications for opportunities for Dutch companies, as further discussed below. On the other hand, there is still much to gain in terms of value from circular economy practices. At this moment, a culture of circular economy is not existing in Panama. According to the 2018 Yale Environmental Performance Index, Panama ranks 56 of 180 countries, and is surpassed by 4 other Latin American countries such as Costa Rica and Venezuela.<sup>5</sup> Safe to say, environmental action in the country is still lackluster, in part due to the **absence of an effective legal framework**.

Specifically placing the state of the economy of Panama on the spectrum from a linear to a circular economy

(see illustration 1), the economy is still in a phase of transition from linear economy to reuse economy. In this sense, there still needs to happen a lot for achieving a reuse economy with a well-established recycling culture, let alone for achieving a circular economy.

#### From a linear to a circular economy

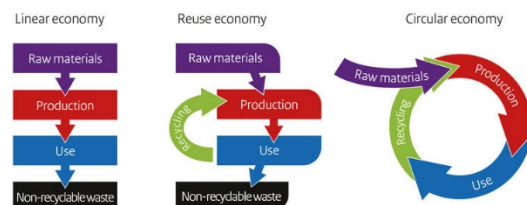


Illustration 1

From a linear to a circular economy

Nevertheless, in September 2019 at the XIV International Symposium on Sustainability, the Industrial Union of Panama (SIP), the Ministry of Environment (MiAmbiente), and the National Council of Private Business (CONEP) announced the creation of a new '**Circular Economy Center of Panama**' in which the said parties are integrated for a productive model for sustainability.<sup>6</sup> This center is yet to be realized in practical terms, and at the moment of writing no updates can be found, meaning the question still remains whether an effective body with the aim of promoting sustainability can be formed through this collaboration of organizations. Most circular economy applications at the moment in Panama can be found in small-scale private enterprises or organizations. To illustrate, in Panama the '**Costa Recicla Foundation**' focuses on retrieving waste with the purpose of recycling, while also providing education with regards to sustainability. The foundation set-up various

<sup>5</sup> <https://epi.envirocenter.yale.edu/2018/report/category/hlt>

<sup>6</sup> <https://elcapitalfinanciero.com/panama-tendra-su-centro-de-economia-circular/>



recollection points in Panama-City.<sup>7</sup> 'Marea Verde' is a non-profit association looking to create awareness about the contamination of rivers and coasts in Panama. They develop initiatives to clean rivers (see illustration 2), while also implementing awareness campaigns.<sup>8</sup> All in all, in the private sector there is enthusiasm towards sustainable solutions such as circular economy, as well as more resources to work with. Currently, circular economy is still in the beginning phase, and time and effort is needed to familiarize sectors with circular economy. However, the institutional framework, and more importantly the legal framework are inherently at the basis of progress in this regard.



Illustration 2  
Marea Verde cleaning a river

### 3.2 Government initiatives

Sustainability is not new on the Panamanian agenda. Laws have been passed and government agencies have been put in place to achieve sustainable goals with regards to for example maintaining biodiversity, counteract deforestation, and The government of newly elected president **Laurentino Cortizo has set out its intended policy strategies in its 'Strategic Plan 2020-2024'**<sup>9</sup> in which attention is also given to sustainability. The plan mentions six primary causes of the environmental problems in Panama, which according to the new administration are lack of environmental education, lack of efficient environmental governance, lack of a national

strategic plan for the environment, obsolete environmental norms, lack of sustainable land use, and insufficient public policies (i.e. laws and decrees). More importantly, the government lists in the plan what main tasks should be undertaken in order to tackle environmental degradation (emphasis added):

1. Create order and enforce laws existing in the environmental issue.
2. Protect biodiversity and natural heritage of Panama, as a priority on the agenda environmental of the country.
3. Incorporate environmental education into school programs.
- 4. Promote actions to combat Change Climate, including enthusiastic momentum of clean energy and the protection of Natural forests of the country.**
5. Consolidate an international policy in around the conservation of the environment and the biodiversity, as well as the fight against change Global climate.
- 6. Start the implementation of a system of municipal and industrial waste recycling at the national level, with priority attention to cities of Panama, Colon, San Miguelito, Santiago and David.**
7. Prevent illegal logging in provinces as in Darién and basins producing water, working closely with the communities and local authorities.
- 8. Promote a pilot electrification plan for the public transport (electric buses, Line 3 of the subway).**
9. Promote an environmental education program to create a culture of progressive reduction of the use of polystyrene (foam) and plastics (plastic bottles, reeds, containers).
- 10. Provide adequate budget to the Ministry of Environment and Aquatic Resource Authority.**
11. Strengthen the technical capacity of the

<sup>7</sup> <https://costarecicla.org/>

<sup>8</sup> <https://www.mareaverdepanama.org/>

<sup>9</sup>

[https://www.gacetaoficial.gob.pa/pdfTemp/28931\\_A/GacetaNo\\_28931a\\_20191231.pdf](https://www.gacetaoficial.gob.pa/pdfTemp/28931_A/GacetaNo_28931a_20191231.pdf)

human resources of the Ministry of Environment.

**12. Promote matrix diversification energy, promoting renewable energy.**

13. Development and updating of plans of management of critical protected areas of the country (Panama Bay Wetland, Park National Chagres, Coiba, among others).

**14. Implement a restoration program and national protection to the ten ecosystems terrestrial and most threatened marine country, through partnerships with communities, NGOs, private sector and international agencies.**

15. Comply with the ‘National Water Security Plan 2015 – 2050’.

Several points of the government’s 2020-2024 strategic plan provide opportunities for potential circular economy business, but it is important to note that the question remains how and when implementation of a comprehensive legal framework to counteract environmental degradation takes place. The Municipality of Panama-City (MUPA) together with AAUD, Cervecería Nacional (CN), and the Association for the Conservation of Nature (ANCON) set up an alliance program called ‘Basura Cero’ (Zero Waste) in 2015, aimed to deal with the impending solid waste crisis in Panama.<sup>10</sup> The strategy of Basura Cero entails consulting with citizens, implementing pilot programs with regards to waste collection, and monitoring and evaluation (see illustration 3). Basura Cero is the only legal initiative that specifically mentions the concept of circular economy at the moment.

Currently, the most important obstacle towards progress in developing a culture of circular economy is overall lackluster government initiative; in the form of the legal framework. There is a law put in place called **Policy of**

**No Waste** (Política No Basura).<sup>11</sup> This law tries to promote and develop a culture of no waste, however, implementation



Illustration 3  
Collection point **Basura Cero**

and political will is lacking for sufficient results with regards to climate action. No incentives, such as subsidies, education, tax-exemption is given by the government in order to promote the transition to a more sustainable economy. Although set out by the government as cause of the insufficient policies of climate change action, it is yet to be seen whether it will therefore tackle the issue and create a legal framework of sustainability, through which progress can be achieved, creating opportunities for circular economy applications.

## 4. Opportunities and risks

### 4.1 Opportunities

- **Water-related**

Panama, just as the Netherlands, deals with multiple water-related issues and challenges that are only intensifying the coming years. In its National Water Security Plan 2015-2050, the Panamanian government set out goals such as securing

<sup>10</sup> <https://basuracero.mupa.gob.pa/wp-content/uploads/2018/03/LIBRO-BASURA-CERO-2016-1era-Edicio%CC%81n.pdf>

<sup>11</sup> <https://basuracero.mupa.gob.pa/wp-content/uploads/2018/08/LEY-33.pdf>

universal access to quality drinking water and sanitation services, obtaining inclusive economic growth using water, and creating a responsible culture towards water sustainability. Investments in water infrastructure such as **Waste Water Treatment plants are concurrent and provide opportunities for Dutch companies in the future**, and therefore tenders should be monitored closely. Moreover, consulting opportunities with regards to the availability of rural and urban drinking water could potentially arise, as the government seeks to ‘circularize’ industrial and household water distribution and consumption.

- **Waste-industry**

With the aim of waste reduction, circular economy initiatives could be of potential value, and Dutch companies can assist the waste sector in achieving goals with regards to for example recycling. The waste recollecting agency in Panama-City, AAUD commissioned Spanish consulting firm INECO to come up with a comprehensive waste management plan for 2017-2027, in which INECO for the most part investigated the composition of waste in Panama and outlined the financial and management aspects for AAUD. The question remains whether Dutch companies would be able to assist AAUD in the near future, with for example waste separation and waste-to-energy programs. What is certain is that waste issues are profound throughout Panama, **and Dutch companies should be on the lookout for when the political will to tackle waste problems intensifies**. To illustrate circular economy applications with regards to waste, the Dutch company Closing The Loop is active in African countries collecting e-waste, primarily mobile phones, and recycling them.<sup>12</sup>

- **Agri-food**

Although not the largest sector in Panama, the agricultural and foodstuffs sector could benefit immensely from systemic change to circularity. Technological innovations have the

potential to decrease costs and to generate added value to food-chains. So-called ‘closing the loop’ is a proven concept in the Netherlands and elsewhere, **through which smart technology can increase the yield of agricultural enterprises while decreasing resources needed**. However, lack of education and ignorance stands in the way for Panamanian producers to accept and adopt new technology. Apart from small-scale research related funding for controlled environment agriculture in green houses, no large-scale application is yet to be found. In other parts of the world, such as the Philippines, a UK-based company is creating a leather-like alternative from the waste of pineapple production, specifically from the leaves.<sup>13</sup> These sort of examples of circular economy could work well in the Panamanian agricultural sector (see illustration 4).



Illustration 4

Pineapple production in Panama: potential for CE applications

For some time now, the Panamanian governments have suggested the construction of a ‘**food hub**’ in Panama. The idea is that, due to the regional importance of Panama as logistical hub for the import and export of food-related products, a food hub could be created in which value is to be added. The idea is similar to the recently created food hub in Rotterdam. Research and efforts around the globe have

<sup>12</sup> <https://www.closingtheloop.eu/>

<sup>13</sup> <https://www.ananas-anam.com/>



shown that decarbonization<sup>14</sup> can be applied to sectors such as the agricultural and logistical sector.



Illustration 5  
Eco-lodges in Panama: potential for CE applications

#### ▪ Tourism

The new Cortizo government is currently betting heavily on investments in the tourism sector amongst others to keep the economy afloat on economic growth. Ecological or sustainable tourism is on the rise in Panama, and this niche sector could provide opportunities for Dutch companies. In terms of for example small-scale sustainable construction of tourist destinations such as eco-lodges to large-scale transition to sustainable energy in the tourism sector. It remains to be seen if the recent statements by the government to invest large amounts of resources in the tourism sector will effectively increase the size of the sector. If it does, it will present opportunities for Dutch companies that are specialized in circular economy. Specifically closing the loop in the tourism sector has potential value, as also tourists are making more responsible choices.

#### ▪ Urbanization

Recent reports by for example the World Bank<sup>15</sup> are arguing that growing urbanization in Panama will pose significant

challenges with regards to urban planning in the short and medium-term, and can negatively affect growth in the long-term. In this sense, it will be imperative for Panama to design and create urban spaces in a smart and resilient way. **Circular economy has the potential to play an important factor in the execution of urban planning.** Dutch companies are renowned for their design of sustainable urban spaces, and examples of Dutch cities, such as Rotterdam, are given around the world. The question remains whether awareness amongst policy-makers in Panama arises with regards to the impending urban issues.

#### ▪ Financial sector

Although the financial sector, which is quite large in Panama, is perhaps not the most obvious field for circular economy applications, there could potentially be opportunities in adequate funding by banks and other financial organizations. At the moment, such entities value sustainability because of the perceived effect on their reputation. In the future, priority could potentially be given towards funding sustainable, and therefore, circular economy enterprises. In this regard, another important factor could be international financial organizations such as the World Bank and the Inter-American Development Bank (IADB). The World Bank, for example, since more than 15 years has a 'Trust Fund for Environmentally & Socially Sustainable Development' (TFESSD),<sup>16</sup> and the IADB has several 'Green Climate Funds'<sup>17</sup> to promote sustainable development.

<sup>14</sup> Decarbonization relates to the notion of reduction of carbon inputs to socioeconomic metabolism, and therefore, the reduction of greenhouse gasses (GHC) emissions.

<sup>15</sup>

<http://documents.worldbank.org/curated/en/180611468100727814/Panama-Locking-in-success-a-systematic-country-diagnostic>

<sup>16</sup>

<http://documents.worldbank.org/curated/en/833871498794041156/pdf/116989-WP-v1-development-PUBLIC-28-6-2017-9-45-35-TFESSDCompletionReport.pdf>

<sup>17</sup> <https://www.greenclimate.fund/ae/idb>

## 4.2 Risks

- **Political will amongst policy-makers**

One of the main drivers behind creating a culture of circular economy necessary to provide opportunities for Dutch companies is the institutional framework, and more importantly, legal framework. The circular economy scene in the Netherlands is taking off because of the incentives provided by the Dutch central and local governments. This is not the case in Panama, and therefore, a potential pitfall could be not generating political will amongst policy makers in the near future. Of essence will be the creation of an effective legal framework. A further risk could be the ineffective implementation of that legal framework, as lower level layers of government could prove insufficient.

- **Funding & economic instability**

Related to and deriving from the issue of political will, are challenges regarding adequate resources for circular economy initiatives. Funding is necessary to kick-start sustainability initiatives in the various economic sectors. Economic instability could prove detrimental to finding funding for projects, but is a complicated factor almost impossible to control. As of right now, the trend of economic growth in Panama is decreasing, and social and economic instability in the regions are increasing.

## 5. Recommendations

### Knowledge-sharing

In the first place, attention should be given to sharing information, skills, expertise, and good practices with Panama. The aim here is to show not only that circular economy has the potential to mitigate environmental degradation, but more importantly, to show that circular economy has the potential to add value to the economy. Ultimately, creating a culture of circular economy starts with sharing experiences, both positive and negative. Sometimes unclear for Panamanians how circular economy can solve problems in a sustainable way, focus should be given to explaining and educating. This means investing time and resources in the promotion of circular economy in various ways such as fairs, presentations, congresses, meetings, etcetera.

### Engaging stakeholders

More specifically, stakeholders such as policy-makers should be effectively targeted and engaged, in order to promote circular economy solutions from the top-down perspective. The transition to circular economy is a time-consuming process, and focus should be given to engage policy-makers to come up with incentives for sustainability. On the other hand, stakeholders at the bottom should be engaged such as private enterprises, NGO's, and other organizations to create promotion from the down-up perspective.

### Develop innovative and unique business cases

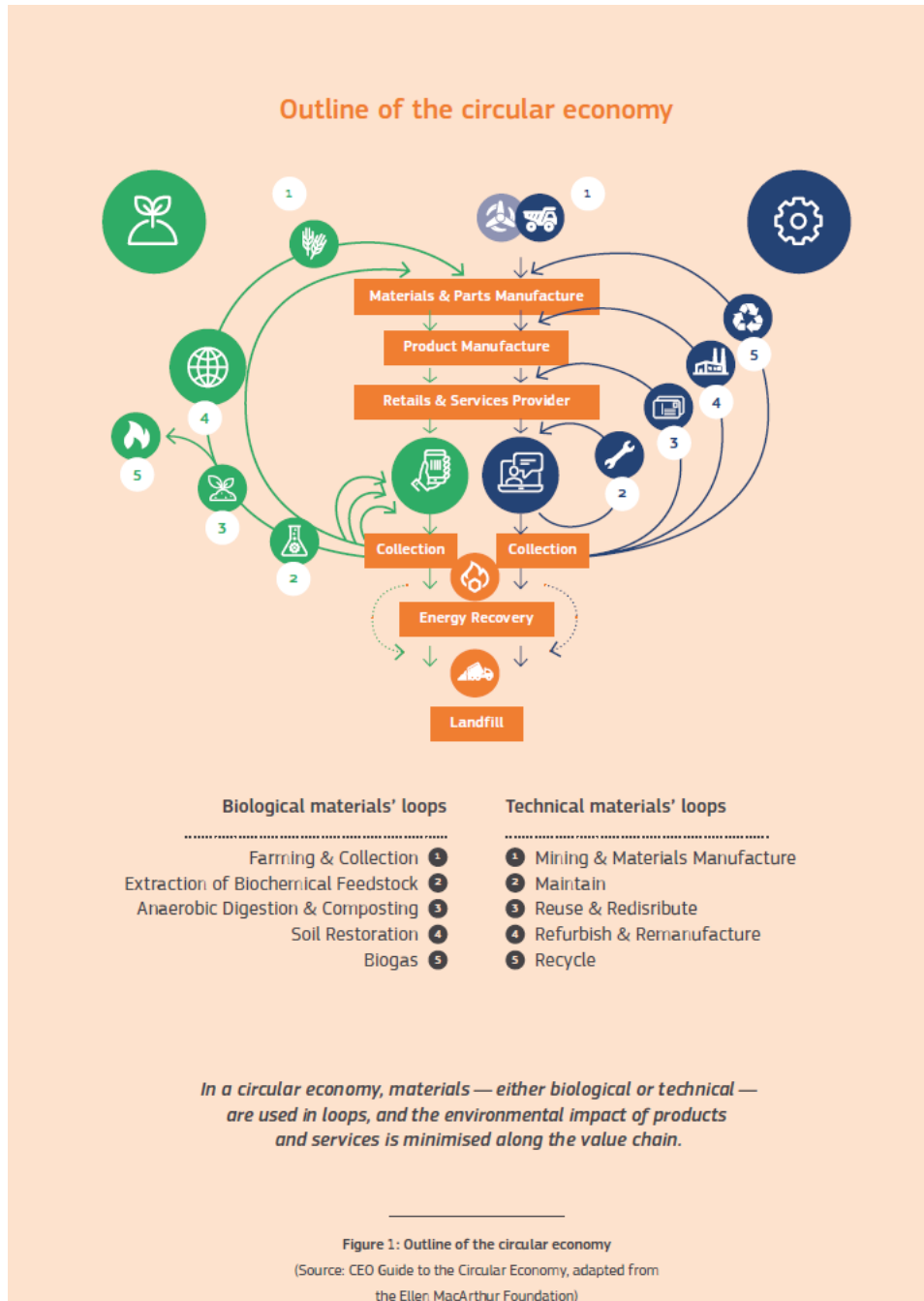
Although the Netherlands and Panama have a lot to learn from each other, acknowledgement should be given to the fact that Panama has a unique social-economic and political context, as does every country has in the world. Therefore, Dutch companies should strive to come up with innovative and unique business cases suitable for Panamanian context.

## 6. Conclusions

- Circular economy in Panama is still in the **initial stage of development**, and there is no culture of circular economy yet in Panama;
- Panama currently is **lacking an effective legal framework** resulting in sufficient policies for climate change action, and therefore circular economy;
- Opportunities for Dutch companies can be found in the sectors of **water, waste industry, urbanization, tourism**, and the **financial** sector;
- Risks include **insufficient political will amongst policy-makers**, and inadequate funding and/or economic instability;
- Recommendations are **knowledge-sharing, engaging stakeholders**, and **develop innovative and unique business cases** for Panama.

## 7. Annex

### 7.1 Outline of the circular economy



### More information

For more information and questions about specific projects or developments mentioned in this report, contact the embassy at [pan-ea@minbuza.nl](mailto:pan-ea@minbuza.nl).

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