

## Supporting waste management initiatives to accelerate the circular economy

Activity 2012-2021



## A global problem

Waste generation has increased massively around the world in recent decades, and there are no signs of it slowing down. By 2050, worldwide municipal solid waste generation is expected to have increased by roughly 70 percent to 3.4 billion metric tons\*.

What happens to this waste varies greatly from country to country, but we know that the rates of collection, recycling and landfill disposal are very low in developing countries.

However, we also know that there are millions of informal waste workers in the world, many of whom remove waste from the environment and sell it to recycling services to provide themselves with a small income.

Over the last 10 years, BVRio has sought to create market mechanisms which deliver social benefit for informal waste workers, while also addressing the global problem of a take–make–dispose linear economy.

\*source World Bank, Urban Development Series - What a Waste 2.0



# 10 years of...

Advocating for and creating tools and initiatives in support of the Circular Economy



**2011**

BVRio launched as a non-profit org in partnership with Rio de Janeiro's Secretaries of Finance and Environment and other stakeholders in Brazil



**2013**

Creation of the Reverse Logistics Credits System in partnership with the National Association of Waste Collector Cooperatives (MNCR) in Brazil. The first circular credit mechanism for the circular economy in the world



**2014**

Sourcing Circular Credits for Brazilian consumer goods companies 'O Boticario' and 'Piraquê' to compensate for their plastic footprint, in partnership with the MNCR



**2014**

Launch of the Solid Waste Policy Observatory (OPNRS) to promote transparency to the implementation process of the Brazilian Solid Waste Legislation



**2014**

Oak Foundation funds the up-scaling of Reverse Logistics Credits System for the Brazilian solid waste sector



**2020**

Feasibility study about strategies for collection and recycling for Tetra Pak in India and Vietnam



**2020**

Launch of Circular Action Hub, the first marketplace platform for the circular economy



**2019**

Study of GHG impact of the solid urban waste sector for the Indian Ministry of Environment, in partnership with Tata Environmental Research Institute and the World Bank



**2019**

Launch of the 3R Initiative (3RI) together with standard setter Verra and global corporates



**2018**

Sourcing of circular credits to meet the EPR obligations of the Brazilian government for Brazilian soft drink manufacturer, Reflexa



**2017**

Creation of the Circular Credits Mechanism, a market mechanism for socially inclusive circular economy projects worldwide



**2020**

Development of 3RI pilot projects in partnership with Danone and Nestlé in Indonesia



**2021**

Market assessment of the circular economy for plastics in Chile, Peru and Brazil, for IFC (World Bank)



**2021**

'Plastic Credits for inclusive and transparent circularity' project created in partnership with PREVENT Waste Alliance of the German government



**2021**

Circular Action Hub reaches 100 registered project milestone, in 35 countries



**2021**

KOLEKT, the first global multi-material waste traceability app is developed in consultation with solid waste producers, collectors and recyclers



**2021**

Guidelines on best practices for plastic credit systems are released in partnership with PREVENT Waste Alliance



**2021**

Partnership between Ogyre and BVRio supports fishers to remove plastic from the ocean in Rio de Janeiro



**2021**

Tetra Pak commissions a CAP for recovery and recycling of used beverage cartons in Vietnam



**2021**

Circular Action Programmes (CAPs) are developed to help consumer goods companies meet EPR regulations

# The 1<sup>st</sup> recycling credits scheme worldwide

## Reverse Logistics Credits - A social and environmental innovation to address urban waste and recycling in Brazil (2012)

In 2010, the Brazilian National Solid Waste Legislation (PNRS) was established requiring producers or importers in selected sectors to ensure the products they sell are collected and disposed of in an environmentally appropriate manner at the end of their lifetime. This obligation is called 'reverse logistics' (Logística Reversa).

The legislation created challenges for many producers, as most were far removed from the final waste generated by the products they sold. At the same time, more than one million waste pickers were operating in Brazil, making a living from the collection of such waste and sending it for recycling.

BVRio recognised the need to connect companies with the waste picker cooperatives, creating a win-win system to tackle the waste pollution challenge and developed a system of Reverse Logistics Credits system, (tradeable 'circular credits') to facilitate producer compliance with the law.

### Impact:

The development and operation of the initial set-up phase, running until the end of 2013, resulted in:

- A partnership with the National Movement of Waste Pickers,
- over 100 cooperatives in 21 states registered on the system, representing more than 3000 Catadores
- the offer of Reverse Logistics Credits derived from the recycling of over 145,000 tonnes of solid waste.



### Project funders:



## Proving the concept

### Early movers adopt BVRio's Reverse Logistics Credits in Brazil (2013-2018)

A series of pilot projects involving consumer goods producers were undertaken to demonstrate the capability and effectiveness of the Reverse Logistics Credits system to meet the Extended Producer Responsibility obligations set by the Brazilian Government. Working with Brazil's National Movement of Waste Pickers the projects delivered a direct benefit to waste pickers.



Sourcing circular credits for Brazilian cosmetics company Boticário.



Sourcing circular credits for Brazilian soft drink manufacturer, Reflexa (Mineirinho).



Sourcing Circular Credits for Brazilian biscuit producer Biscoitos Piraquê.



## Ensuring transparency

### Development of the **Solid Waste Policy Observatory (OPNRS)**

In 2014, BVRio, ABRAMPA (Brazilian Association of Environmental Public Prosecutors), Instituto ETHOS and another 22 organisations involved in the solid waste management in Brazil founded the Brazilian Solid Waste Observatory.

The Observatory is an initiative created to monitor, publish, and divulge information related to the implementation of the Brazilian Solid Waste Legislation (PNRS).

The ultimate objective of the Observatory is to promote the widespread implementation of the PNRS all over the country



# Globalisation

In 2019 the 3R Initiative (3RI) was launched with the aim to evolve the Reverse Logistics Credit system into an international plastic credits scheme, together with standard-setter Verra and global corporates.

## The 3R Initiative

At the end of the three year project, the outcomes were:

- **Guidelines for Corporate Plastic Stewardship**, which set out best practices for companies that aim to reduce plastic waste and achieve circular use of plastic, moved forward as a key input of the World Business Council for Sustainable Development's Corporate Plastic Footprinting and Disclosure (WBCSD) workstream.
- **The Plastic Waste Reduction Standard**, managed by Verra, set out requirements for new or scaled-up plastic waste collection and recycling projects to quantify their impact in a credible, transparent and consistent way to generate Plastic Credits.
- **The Circular Action Hub**, managed by BVRio, a platform to connect circular economy initiatives worldwide with investors to support their packaging recovery activities and foster the circular economy either through direct financial support or through the acquisition of credits.

Technical founding members:



Corporate founding members:



Advisory members:



## Putting it into practice

### 3RI pilot projects with Nestlé and Danone, in Indonesia

In 2020 BVRio assisted Nestlé and Danone in preparing the Verra ‘Plastic Credits’ documentation (“PDDs”) for their two pilot projects of collection and recycling of plastic packaging waste in Indonesia. These were the first tests of the use of the Verra Plastic Waste Reduction Standard for issuing Plastic Credits.



**Nestlé** Good food, Good life



Muncar is coastal fishing community in Banyuwangi, Indonesia. With minimal waste services in place, the majority of citizens are forced to dump their waste directly into the environment. Muncar was chosen as the first location chosen for PROJECT STOP due to the seriousness of the challenge, coupled with strong leadership and environmental commitment at national, regency and local levels.

Through Project STOP, an increasing number of Muncar households and business are having their waste collected and recycled.



Tempat Pemrosesan Sampah Terpadu (TPST) Lamongan is a project financially supported by Nestlé with the aim to increase the collection and recycling of plastic packaging in the Lamongan Regency, East Java, Indonesia.

# Bringing it all together

## Circular Action Hub (2020)

An output from the 3R Initiative, the Circular Action Hub (the Hub) is the home of BVRio's waste footprint solutions. It incorporates a directory of global solid waste management projects and activities looking for support from companies and investors willing to fund, accelerate and strengthen a more effective and socially-responsible circular economy.

“The Hub is accessible and easy to use. Its strength is the variety and the broad geographic distribution of the projects that are available on it.”

## PREVENT Waste Alliance



**CIRCULAR  
ACTION HUB**  
a BVRio initiative

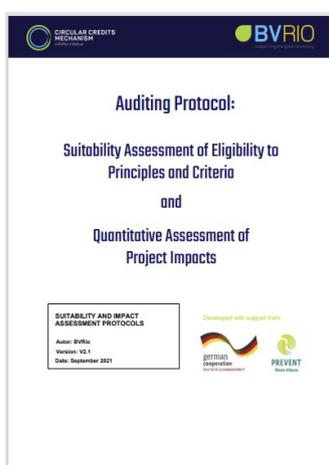
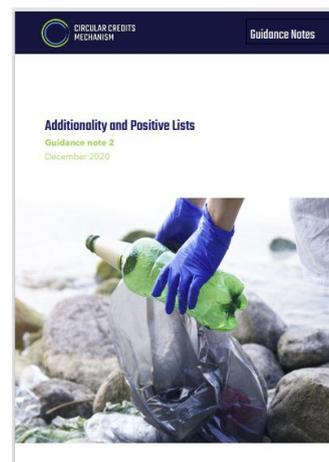
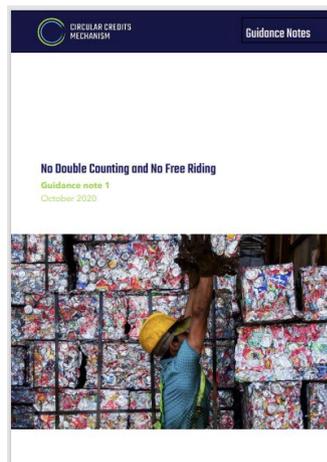
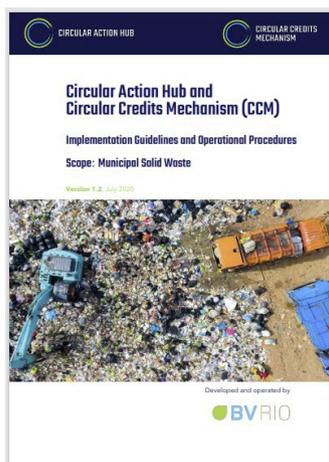
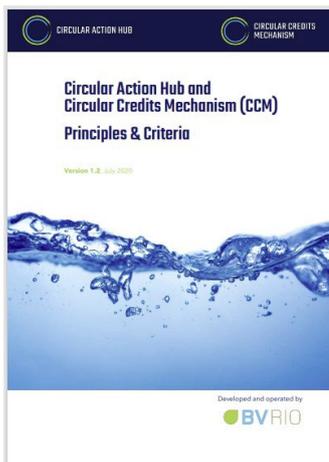
- 100+ projects registered in the first year
- from 30+ countries
- Over half a million tonnes recycling capacity
- Multi-material transactions
- Free project enrolment
- Multiple funding options for corporates

BVRio waste footprint solutions for corporates are provided through ***Circular Action***, a BVRio group company incorporated in January 2021.



# Providing a guiding hand

One of Circular Action Hub's goals is building capacity and fostering innovation by providing information, facilitating knowledge sharing and exchange of local solutions. BVRio develops useful resources for project developers, cooperatives, local innovators as well as investors and corporations.



“We believe the audit leads us to improvements and growth, not only as a team, but as a project so that the impact on the community and on the planet is greater and clearer.”

**Virginia Morales**, Monitoring and Operations leader at Entreamigos.

# Removing barriers

## Circular Credits Mechanism (2020)

Traditional project cycles for environmental markets require the validation, registration, independent verification, and issuance of credits before developers can receive any financial return. Transaction costs involved can be significant, and beyond the means of many project developers.

The CCM was designed by BVRio to be inclusive and accessible to all, especially SMEs and community-based operations, and to offer a Credits solution for more waste materials than plastic alone.

For this reason, the CCM adopts an inverted project cycle where developers can post their offers based on self-declarations that are verified only after projects secure financial support. There are no costs associated with project registration and credit issuance, and all other transaction costs are covered by the buyers.

Circular Credits are transacted exclusively through the Circular Action Hub, which also acts as the Registry.



### CCM Principles & Criteria

ADDITIONALITY

NO DOUBLE COUNTING

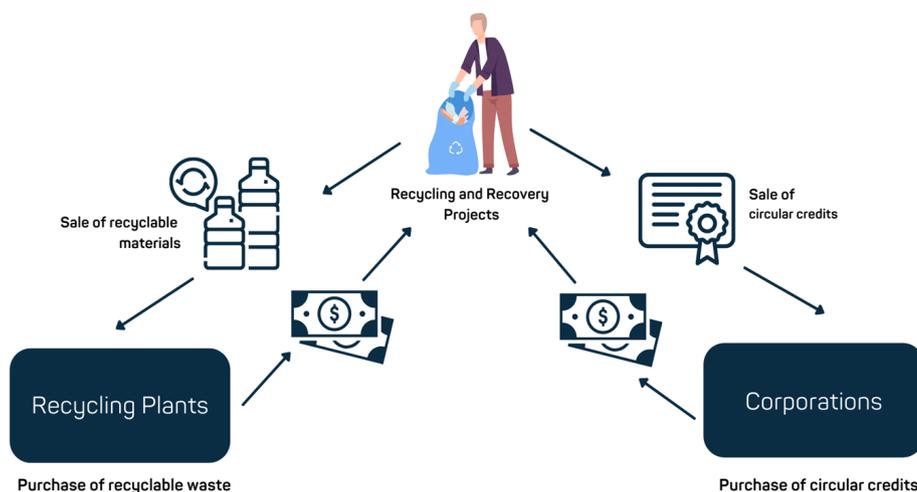
DEMONSTRABILITY

NO FREE-RIDING

FAIR REMUNERATION

DO NO HARM

LEARNING BY DOING



### Impact

Credits registered (2022):  
**512,000 credits /year**

1 credit = 1 ton recycled material

## Supporting projects:

### Plastic Credits for inclusive and transparent circularity

In April 2021, in partnership with PREVENT Waste Alliance, BVRio developed a 12 month long project aiming to benefit around 300 waste pickers in Brazil and Mexico. The project is run by an international consortium and BVRio is the organisation responsible for the coordinating the activities in Brazil and Mexico, in partnership with Mexican NGO Entreamigos.



"After 8 months of hard work, we were able to hand out safety boots, t-shirts and an economic bonus for 121 collectors of the network located in different towns that collected a total of 107 tons of plastic."

**Entreamigos, Mexico**

#### Project funders:



## Utilising mobile technology

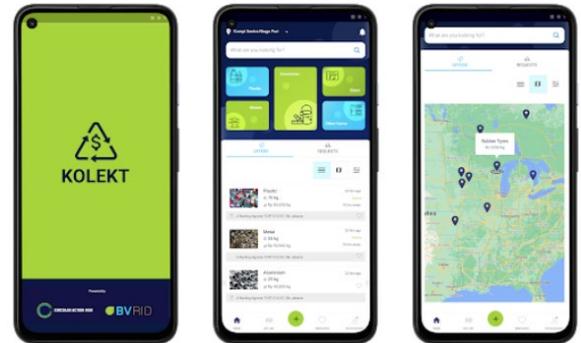
### Getting additional income straight into waste pickers' hands - KOLEKT waste management app (2021)

We believe that remuneration for waste services should be accessible to all, so we work to remove barriers and to create mechanisms which support this.

The KOLEKT app is the world's first multi-material global waste management app. It was developed through consultation with over 200 waste pickers, collection centres and recyclers in India, Vietnam, Brazil and Indonesia, where the app is currently undergoing trials.

KOLEKT for:

- **Waste pickers** – free to use, fast access to funds, can be used with basic phones, or even no phone at all
- **Waste generators** – can offer or sell recyclables to collectors in their area
- **Waste processors** – can increase volumes and provide certification.
- **Brands** – reduces waste footprints and rewards informal collectors directly. Licences can be purchased to access country or material specific data.

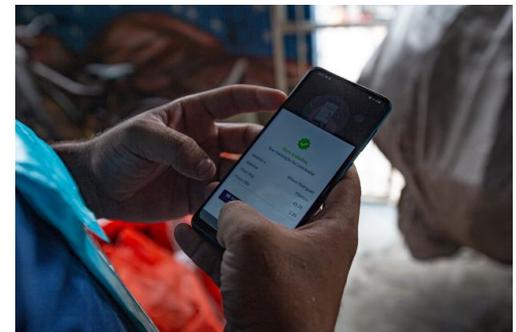


[www.kolekt.app](http://www.kolekt.app)

Delivered by:



Developed with funding from:



# Waste Footprint Solutions for producers

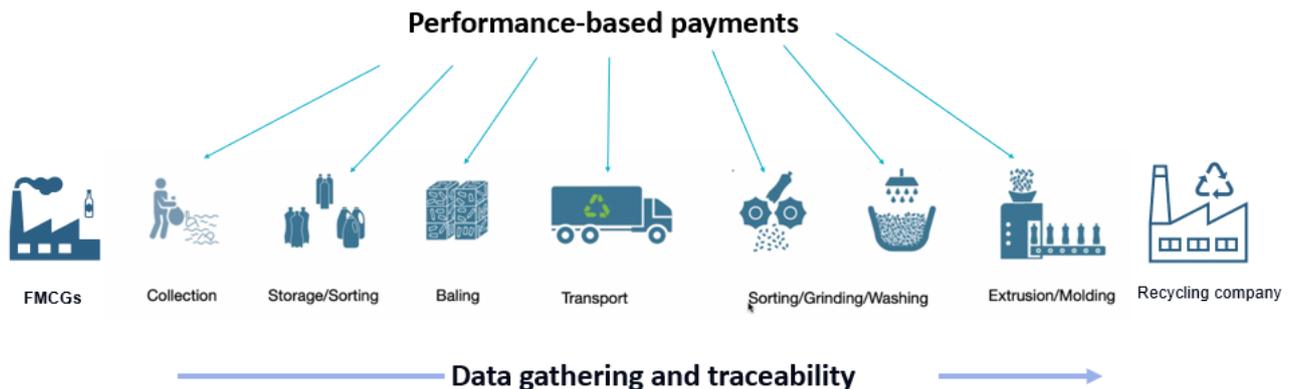
## Circular Action Programmes (CAPs) (2021)

Circular Action Programmes (CAPs) are customisable waste footprint solutions based on engaging all actors in the waste supply chain and providing incentives for collection, sorting and recycling of waste materials.

The system is managed using the KOLEKT app, to register all actors participating in waste management supply chains to enable the traceability of waste along the supply chain.

The full set of activities involved in the development and operation of the CAP consists of four phases:

1. Initial diagnostic of the waste management situation affecting the Client's operations
2. Programme design
3. Inception of the programme, and
4. Continuous operation and administration of the CAP.



Delivered by:



## CAPs in action:

### Recycling beverage cartons in Vietnam (2021-2022)

In 2020 BVRio conducted a feasibility study for Tetra Pak looking at strategies for collection and recycling of 25,000 tons of used beverage cartons in India and Vietnam.

Following the feasibility study, in 2021 BVRio developed a pilot CAP to manage the recovery and recycling of 3,000 tonnes of used beverage cartons in Vietnam.

The project will involve 1500 waste pickers using the KOLEKT mobile app to buy/sell materials, monitor material flows, pay incentives to informal collectors. The cartons collected will be delivered to a recycler.



Delivered by:



Project funders:



# CAPS in action:

## Fishing for plastic in Guanabara Bay

In December 2021, Italian ocean plastic recovery initiative, Ogyre, commissioned *Circular Action* to create a Circular Action Programme (CAP) to facilitate and oversee a three month long project to recover plastic from the sea and mangroves of the Guanabara Bay, Rio de Janeiro, Brazil. The project has been continued to operate throughout 2022 with higher recovery targets.

Involving local fishers using rowing boats in their usual catch area, the project aims to recover 10 tons of plastic over 12 weeks of activity.

According to the coordinator of the Fishermen's Association of Bancários Beach, Ronaldo Alves Barboza, about 30% to 40% of plastic waste collected has market value, and so the 'plastic catch' will be traded with a local recycling centre using the KOLEKT app.

*Circular Action* is responsible for the implementation and monitoring of activities, preparation of Monitoring Reports, contracting and supervising independent project verification, and credit issuance and retirement on behalf of Ogyre.

“We are very excited to have found an organization like BVRio that already has experience in international projects but still maintain a good relationship with the local communities in which it operates. That’s the kind of partners we want to achieve our mission of a clean Ocean”, **Ogyre CEO**

Delivered by:



Project funder:

**ogyre**

# Market Assessment for Plastics Circularity in South America

In 2021 BVRio undertook a market assessment for the IFC to identify the key interventions in the private and/or public sector that could accelerate a circular economy for plastics in Chile, Peru and Brazil, in partnership with UK waste management specialist WRAP.

The key objectives of the project were:

- Development of a landscape assessment, including a clear plastic material flow to identify hotspots of mismanagement and leakages.
- Elaboration of a stakeholder map and analysis to understand who the key players are, what are they currently doing and what are the main challenges they face to adopt circularity in this market.
- Policy review, recognising barriers and analysing best practices to identify opportunities that could enable a circular economy for plastics in each country.
- Prospecting what would be high impact business opportunities that tackle the challenges and hotspots previously identified, as well as other market or policy interventions that could contribute to eliminate leakages and maintain the plastic in the system and out of the environment.
- Elaboration of roadmap and accompanied by a strategy for resource mobilisation and partnership to create a platform for long-term collaborative action.
- Identify potential private companies for IFC cooperation opportunities.

Partners:

Project funder:



## What's next?

BVRio's five year strategy seeks to continue this work, scaling up our waste footprint solutions for FMCG producers and championing the use of circular economy solutions to provide positive environmental and social impacts.

We would like to talk to organisations who can help us to achieve our goals of:

- Continuing to operate the Circular Action Hub as a free platform for informal initiatives to list projects and seek funding
- Promoting the work of informal waste pickers worldwide and ensuring that recycling activities are well remunerated
- Helping to advance recycling technologies and facilities by engaging and connecting supply chains which include the informal sector
- Seeking additional opportunities for informal waste pickers to earn from the recycling of a broader range of materials



# Working in Partnership

Thank you to all of our partners and supporters over the last 10 years.



