RSB MONITORING & EVALUATION SYSTEM

The Roundtable on Sustainable Biomaterials (RSB) is a global, multi-stakeholder independent organisation that drives the development of a new world bioeconomy through sustainability solutions, certification and collaborative partnerships.

It provides tools and solutions that mitigate business risk, contribute to achieving the UN’s Sustainable Development Goals and has the world’s most trusted, peer-reviewed, global certification standard for sustainable biomaterials, biofuels and biomass production. The RSB has members from a worldwide movement of businesses, NGOs, academics, government and UN organisations that all have the same goal of supporting and driving best practice for sustainable biomaterial production.

The RSB has Monitoring & Evaluation (M&E) System designed to measure this success in biomass supply chains. The RSB monitors its performance by processing data collected among its certified operators and other stakeholders through a set of indicators, which cover environmental, social and economic issues and the context in which operators work. The measured impacts are compared to the expected results and outcomes, as defined in the initial RSB “Theory of Change”, which describes the short-term, mid-term and long-term effects the RSB is expected to drive in terms of contributing to developing a sustainable bio-based economy.

Results from the M&E system feed into the continuous improvement of the RSB Standard, Policies, Guidance and Tools of the certification system, as well the RSB strategies and activities. Committed to transparency, the RSB prepares M&E Outcome reports annually and circulates them amongst RSB stakeholders for comments and further improvements to the system.
EVALUATION OBJECTIVES AND SCOPE

Objectives

This Outcome Evaluation Report aims to evaluate the results obtained by the RSB and compare them to the expected outcomes, as defined in the RSB's Theory of Change.

Specific objectives of this report are to:

- Test and further improve the RSB’s M&E data collection system and indicators
- Aggregate data from certified operators and RSB records and analyse them to draw conclusions
- Evaluate achieved outcomes of the RSB
- Feed into the general strategic discussions of the RSB
- Comply with the ISEAL Impact Code

Scope

This Outcome Evaluation includes all operators certified by the RSB and all RSB activities as of December 2016. The evaluation was conducted internally by staff of the RSB Secretariat and is based on data collected by independent third-party auditors. Production volumes were calculated for the balancing period 1 January 2015 - 31 December 2016.

METHODOLOGICAL APPROACH

Data Collected

The RSB monitors its performance by processing data collected among its certified operators and RSB records through a set of outcome indicators, which cover environmental, social and economic issues.

Methods to Collect

The data points required for the RSB M&E System are collected through the continuously ongoing certification processes. This data collection method allows the RSB Secretariat to continuously collect actual and third party verified data.

Interpretation and Evaluation

The results obtained through the aggregation of data from certified operators and RSB activities are interpreted and evaluated considering the expected outcomes, as defined in the RSB Theory of Change.
Since the last outcome evaluation report in 2014, the RSB changed the structure of M&E data collection significantly.

When the RSB started its M&E system, only selective data was collected and the quality was not validated. In 2016, this process was improved to continuously collect data during the certification process, guaranteeing the availability of actual, third-party verified data.

Not only does the RSB M&E system now collect actual data on volumes produced, hectares covered and workers in the scope of certification but also data about areas in which non-conformities have been issued. This information helps RSB to draw conclusions about the areas of change and the impacts of the RSB certification system. The results of this M&E reporting period will feed into the organisation's learning process and will help the RSB to look at areas of change in more detail, and gain better understanding about the impact of its work.

### UPTAKE OF THE RSB STANDARD

#### Diversity

The RSB is a feedstock and supply chain agnostic standard, i.e. a complete supply chain as well as novel biomass and biomaterial technologies (such as oil and sugar based biofuels, cellulosic ethanol and chemicals, renewable diesel and biojet, bioplastics, biolubricants and other bio-based chemicals) can be certified. In 2015 and 2016, the biomass and product diversity further increased:

<table>
<thead>
<tr>
<th>DIVERSITY OF FEEDSTOCK TYPES</th>
<th>2014</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat Starch</td>
<td>Wheat Starch</td>
<td></td>
</tr>
<tr>
<td>Sugarcane</td>
<td></td>
<td>Sugarcane</td>
</tr>
<tr>
<td>Jatropha Curcas</td>
<td></td>
<td>Industrial Waste</td>
</tr>
<tr>
<td>Used Cooking Oil</td>
<td></td>
<td>Used Cooking Oil</td>
</tr>
<tr>
<td>Yellow Grease</td>
<td></td>
<td>Yellow Grease</td>
</tr>
<tr>
<td>Carinata</td>
<td></td>
<td>Carinata</td>
</tr>
<tr>
<td>Waste CO Gas</td>
<td></td>
<td>Waste CO Gas</td>
</tr>
<tr>
<td>Camelina</td>
<td></td>
<td>Camelina</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Glycerol</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Coconut</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gliricidia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Macaúba</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Solaris tobacco</td>
</tr>
</tbody>
</table>

New feedstocks were included into the RSB System since last outcome report: **Solaris tobacco, Glycerol, Coconut, Gliricidia, Macaúba.**
The RSB M&E System measures certified operators, operational sites included in the scope of certification and countries of operation. Since the last outcome report, the RSB saw growth in all categories:

<table>
<thead>
<tr>
<th>Outcome Report</th>
<th>Operators</th>
<th>Sites</th>
<th>Farms</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 2014</td>
<td>17</td>
<td>23</td>
<td>166</td>
<td>14</td>
</tr>
<tr>
<td>December 2016</td>
<td>20</td>
<td>49</td>
<td>472</td>
<td>17</td>
</tr>
</tbody>
</table>

New countries represented in the RSB system are: Tunisia, Sri Lanka and the Philippines.

The numbers show that the number of operational sites grew significantly while there was only a slow growth in total operators certified. This is due to the RSB standard, which allows operators to define the scope of certification according to their own management structure. Operators can include sites and other companies in their scope of certification if the overall implementation of the RSB standard is ensured by their management system. This enables operators to handle the certification process more efficiently. The data collected shows that the option to expand the scope of certification is well used by certified operators.
As all operators fully comply with the RSB Principle 3 on Greenhouse Gas emissions, 1 t of CO2 will be emitted by a car with a gasoline consumption of 7l/100 km on a 6,000 km distance which is about the distance from Chicago (Illinois) to Anchorage (Alaska).

Please note that this calculation is conservative as it does only include the biofuels that were sold as RSB-certified on the market. In addition, only the minimum threshold of 50% emission reduction was considered not accounting for the fact that some pathways do have much higher emission reduction values.

An average car driving around 18,300 km per year emits 4.7 t CO2 per year. The avoided GHG emissions through RSB certified operators correspond to the emissions of more than 62,000 cars.

Since RSB’s beginning (2012), a total of 732,295.36 MT of CO2eq emissions were prevented.

Environmental Aspects

As of 31 December 2016, the RSB certification covered an area of **56,785.14 ha.**

On this land, responsible and sustainable practices, as per the RSB’s **Principles & Criteria** are implemented, for example:

- Soil erosion reduction and soil conservation practices; improvement of the soil quality
- Water management
- Protection of conservation values

**DATA COLLECTED THROUGH CERTIFICATION BODIES AND AUDITORS**

Indicate impacts in the following areas:

As operators are required to close major non-conformities within three months and minor non-conformities within 12 months, this indicator shows impacts in these areas due to implementation of the RSB standard.

During the audits it was also found that 25% of operators had not yet implemented best practice in the area of responsible water use; ensuring water rights, quality and availability. For these operators to achieve certification they had to improve their water management based on the RSB’s standard.

This table shows in which areas non-conformities have been issued (the number shows the proportion of operators with NC in that area in relation to total operators certified) e.g. for 10% of the certified operators, non-conformities in the area of conservation have been issued.
SOCIAL ASPECTS

1941 workers are covered by RSB certification and are therefore protected by the RSB requirements on human and labour rights, including:

- Freedom of association
- No slave labour or forced labour
- No child labour
- No discrimination
- Minimum wage
- Safety and health
- Grievance mechanism for workers

RSB Certification Bodies issued non-conformities for 40% of the operators which must be closed by certified operators in the defined timeframes. This means RSB had a direct impact on improving working conditions and overall safety for staff working for these operators.

RSB had a direct impact on improving working conditions and overall safety for staff
The farms are located in the region of Taquaritinga, São Paulo state, Brazil. The area included in the scope of the study comprised 653 ha (total area), being 466 ha of sugar cane plantations.

The study is based on data collected during the early stage of the “Cana Sustentável” project. Two RSB consultants carried out initial inspections in April 2016. The data collection included mixed methods: semi-structured interviews with farmers and their family members (when present), interviews with Socicana team, on-site visit using RSB smallholder standard as checklist. After implementation of actions to address the issues identified in the initial inspection, the group was evaluated (by sampling, 4 farmers were audited) against RSB smallholder standards by independent auditors (RSB accredited Certification Body).

The comparison of issues observed in the initial stage (before the “Cana Sustentável” Program) and those raised during the certification audit indicated that the Socicana group was able to address the main requirements for the “year zero” of RSB standard for smallholder groups and prepare adequate plans to correct the deviations identified in the initial inspection.

During the period from March to September 2016, the Association worked on the implementation of a management system aligned with RSB standard for group management. Socicana prepared new procedures and forms, trained their team on the new system, developed a work book to be used by farmers to collect and record relevant production data and costs, organised the chain of custody system, among others. In parallel, the association “translated” the RSB P&C into a series of practical measures and plans which could be adopted at small farm level.
<table>
<thead>
<tr>
<th>RSB PRINCIPLES</th>
<th>EXAMPLES OF ACTIVITIES PLANNED/IMPLEMENTED BY THE GROUP FOR RSB CERTIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Principle 1:</strong> Legality</td>
<td>The association legal department identified the specific farmers' demand for information, searched for responses and Socicana technical team provided guidance to producers (for example for adequate pesticide storage areas, to comply with safety standards)</td>
</tr>
<tr>
<td><strong>Principle 4:</strong> Human and Labour Rights</td>
<td>The association elaborated a workbook (“Caderno de campo”) and provided training to farmers for data collection about each stage of sugar cane production, including operations, inputs and costs. The association will assist the farmers in analysing their results.</td>
</tr>
<tr>
<td><strong>Principle 2:</strong> Planning, Monitoring and Continuous improvement</td>
<td>The workbook prepared for data collection will help to obtain actual data for the farms (for example: amount of fertilizers and pesticides applied, diesel consumption, sugar cane yield)</td>
</tr>
<tr>
<td><strong>Principle 3:</strong> Greenhouse Gas Emissions</td>
<td>Satellite images were analysed for each farm. Farms boundaries were identified in the images to verify any land use change. The association prepared an “Environmental Management Plan” for the group, covering the topics related to biodiversity, restoration of preservation areas, and other environmental measures applied at farm level. Association technical team provided guidance to farmers regarding inorganic waste disposal.</td>
</tr>
<tr>
<td><strong>Principle 7:</strong> Conservation</td>
<td><strong>Principle 9:</strong> Water</td>
</tr>
</tbody>
</table>
SMALLHOLDER CASE STUDY

CONCLUSION

It was verified that the technical support provided to smallholders through RSB certification process helped them to find solutions for some old and chronic problems and to motivate them to initiate the application of better practices.

The vulnerability and risks perceived by the industry related to inclusion of smallholder in sugarcane supply chains in Brazil seems to be not well substantiated. Despite the small sampling, the present case study can be used as a reference for further assessments and discussions about how smallholders and their associations can respond to the challenges of implementing sustainable practices.

"RSB certification has a great potential to be used as a framework to build trust"

RSB certification has a great potential to be used as a framework to build trust, improving relationships between farmers and their associations, as well as between the farmers’ associations and the market (food, biofuels, bioplastics, cosmetics, among other industries). It can also further integrate smallholders and other independent farmers into the supply chain, helping to mitigate risks and strengthen the supply chain as a whole. On the other side, the downstream organisations can use the RSB approach in their sustainability/outreach programmes for farmers to enhance their positive impact as a demand generator for sustainable products.

The lessons learned from this case will be shared with other small farmers groups around the world, in special with other sugar cane producers in Brazil and South Africa.
SUPPORTING STRATEGIES

MULTI-STAKEHOLDER DIALOGUE AND ENABLING ENVIRONMENT

As a membership-based organisation that draws its strength from the depth and diversity of stakeholders represented, the need for a strong stakeholder mapping strategy is critical to the Roundtable on Sustainable Biomaterials.

The geographic scope of the RSB’s activities is huge – encompassing nearly all areas of the globe, spanning different types of ecosystems and different cultural settings. The issues addressed are equally complex: from social issues such as human and labour rights, to food security, biodiversity and water impacts. The need for stakeholders with a diversity of real-world experience in the topics addressed is critical.

And finally, a strong communications strategy, one that allows for dialogue and sharing of ideas, and promotes collaboration and consensus building between disparate groups, is the pillar to the RSB’s progress. As an organisation that draws its strength from the buy-in and support of industry, NGOs and civil society organisations throughout the world, it will be critical that the RSB continue to develop and strengthen its stakeholder outreach and communication strategies.

The RSB employs a variety of methods to engage with its stakeholders, including in-person meetings, regional meetings, webinars and conference calls. In 2016, 323 stakeholders were engaged.
THE FOLLOWING GRAPHICS SHOW

How RSB stakeholders used the opportunities to engage with us and their regional representation.

RSB STAKEHOLDER ENGAGEMENT 2016

STAKEHOLDERS PER REGION
SUMMARY AND OUTLOOK

The RSB M&E system is a relatively young system which still has a steep learning curve. The collection of basic data sets has been significantly improved over the last years and first case studies have been developed.

For the next years, RSB is planning to further evolve its M&E system by developing:

- A centralised database with shape files of all certified areas
- More case studies
- Refined indicators to measure more exactly the changes on the ground
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