

## Project summaries for Bonsucro Impact Fund projects

# Contents

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Name of the project: <i>Using sugarcane intercropping to simulate no-tillage conditions</i> .....	2
Name of the project: <i>Promoting sustainable sugarcane production among smallholders of Pakistan</i>	3
Name of the project: <i>Incentives and rewards platform for continuous improvement of smallholder sugarcane farmers, Brazil (Piracicaba) –Colombia (Valle del Cauca) –Uruguay (Bella Unión) – Paraguay (Department of Guairá)</i> .....	5
Name of the project: <i>Monitoring network for efficient use of water and pesticides in sugarcane production</i> .....	7
Name of the project: <i>Reduction of global warming through the production of sugarcane in Mexico</i> .	9
Name of the project: <i>Human Rights Due Diligence toolkit for sugarcane mills</i> .....	11
Name of the project: <i>Using digital tools and multi-stakeholder engagement to improve human rights due diligence</i> .....	13
Name of the project: <i>Driving decent work and safer working conditions for sugarcane farmers in Eswatini through technology</i> .....	15
Name of the project: <i>Protecting workers in a changing climate in Diageo’s rum supply chain</i> .....	17
Name of the project: <i>Sowing water, harvesting life</i> .....	19
Name of the project: <i>Strengthening and connectivity of protective ecological connectivity corridors for the sustainable management of water resources in the hydrographic basin of the Amaime river, Valle del Cauca, Colombia</i> .....	21
Name of the project: <i>GeRa Cana – Management and traceability of sugarcane production to rural producers</i> .....	23
Name of the project: <i>Building smallholders’ climate resilience in Pakistan’s challenging soil conditions</i> .....	25
Name of the project: <i>Water for the future with small sugarcane producers in Ecuador</i> .....	27

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## Name of the project: Using sugarcane intercropping to simulate no-tillage conditions

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**Call for proposals theme:** Innovating sustainability in smallholder sugarcane farming

**Project lead:** [Bariri Sugarcane Suppliers Association \(Assobari\)](#)

**Co-lead:** [Coopercitrus Cooperative of Rural Producers](#)

**Grant awarded:** £30,000

**Project budget:** £47,530



Assobari is the association for sugarcane suppliers in Bariri, in the São Paulo state of Brazil. It brings together farmers to defend their interests, share knowledge and offer technical and social support. The project is run in partnership with Coopercitrus, a Brazilian cooperative in the commercialisation of agricultural inputs, machines and implements. It has a membership of 38,000 farmers across various crops.

### Purpose of the project

The project aims to test no-till and Integrated Crop – Livestock – Forestry Systems in sugarcane and identify the productivity and sustainability benefits.

[No till farming](#) is the practice of planting crops without digging, stirring, and turning the soil over.

[Integrated Crop-Livestock-Forestry Systems](#) (ICLFS) is an agricultural production approach that integrates different production systems – agricultural, animal farming and forestry – within the same area. It can be done through intercropping, crop succession or crop rotation, so that all the activities are mutually beneficial. They aim to optimise land use and increase productivity.

### Expected outcomes

- Improved soil health in sugarcane plantations through a lower use of inputs and agrochemicals, crop diversity and no tillage.
- Positive financial impact on farmers through higher quality and yields, reduced costs and business growth opportunities.

## Name of the project: Promoting sustainable sugarcane production among smallholders of Pakistan

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**Call for proposals theme:** Innovating sustainability in smallholder sugarcane farming

**Project lead:** [WWF Pakistan](#)

**Co-lead:** [Shakarganj Limited](#)

**Grant awarded:** £29,252

**Project budget:** £48,524



WWF Pakistan is the largest independent nature conservation NGO in the country. Its mission is to preserve Pakistan's biodiversity and natural resources. Through its Food & Markets (F&M) Programme, it is tackling the socio-economic and environmental challenges of agricultural commodities through economically efficient ecological solutions and technologies.

The project is run in partnership with Shakarganj, a producer of refined cane sugar and sugar by-products. Its brand Shakarganj Sugar is one of the leading brands of refined and specialty sugars in the Pakistani retail market.

### **Purpose of the project**

According to the Global Climate Risk Index, Pakistan is the 8th most vulnerable country to climate change. The climate crisis is significantly affecting sugarcane production in the country. For every 1°C temperature increase, the yield of sugarcane decreases by 1% (Afghan, 2013).

Smallholder farmers account for around 64% of sugarcane cultivation in Pakistan and are most vulnerable to climate change impacts.

To address these challenges, WWF Pakistan wants to train sugarcane smallholders to:

- better understand sustainable practices
- enable them to effectively respond to the climate crisis.

The project will enhance resilience of smallholders who have been hit hard by climate change through locally feasible solutions, using the Bonsucro Standards as guiding principles, including decent work. The proposed interventions will also help mitigate the negative impacts of sugarcane farming, such as unsustainable irrigation, excessive use of agrochemicals, and soil degradation. The interventions will improve the working environment for farmers.

Training will also be delivered to the staff of the [Agriculture Extension Department of the Government of Punjab](#).

WWF and Shakarganj have set the following targets by 2024:

- At least 2,000 smallholders have the capacity to adopt sustainable sugarcane production practices on around 3,000 hectares, in line with the Bonsucro Smallholder Production Standard.
- An effective mechanism is in place for the procurement of sustainably produced sugarcane by the local sugar industry to support the project-engaged farmers.

Ultimately, the project has a long-term vision to lay the foundations for Bonsucro certified sugarcane to predominate the Pakistani market by 2030.

#### **Expected outcomes**

- Stronger smallholder resilience to climate change and better mitigation of the negative impacts of sugarcane production, through improved practices in line with Bonsucro's Standard for Smallholders.
- Economic benefits for farmers through higher yields, reduced costs, and better relationships with mills – resulting in better prices.
- Better understanding of local contexts and of sustainable practices by the Punjab government, resulting in institutional support.

## **Name of the project: Incentives and rewards platform for continuous improvement of smallholder sugarcane farmers, Brazil (Piracicaba) –Colombia (Valle del Cauca) –Uruguay (Bella Unión) –Paraguay (Department of Guairá)**

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**Call for proposals theme:** Innovating sustainability in smallholder sugarcane farming

**Project lead:** [Solidaridad](#)

**Co-leads:** [Raízen](#) and [Koppert](#)

**Local partners:** [Alur](#), [Cenicaña](#)

**Grant awarded:** £30,000

**Project budget:** £85,740



Solidaridad is an international civil society organisation with over 50 years of experience in developing solutions to make agricultural value chains more sustainable and inclusive. In South America, it currently operates projects to promote the adoption of good practices in sugarcane in Brazil, Colombia, Argentina, Uruguay, Mexico, El Salvador, and Honduras.

The project is run in partnership with Raízen, one of the world's leading sugarcane processing companies, and Koppert, a company providing solutions for the biological control of pests and diseases.

### **Purpose of the project**

Solidaridad and its partners want to:

- Increase the uptake of sustainable practices in small-scale sugarcane production in line with Bonsucro's Production Standard for Smallholders.
- Reward smallholder farmers for their contribution to more sustainable and resilient value chains, regardless of their actual capacity to achieve formal Bonsucro certification.

Engaging with smallholders on sustainability requires an understanding of how smallholder farmers lead with behaviour change and risks. Farmers are more likely to adopt sustainable practices when

there is a clear business case that results in increased income or profitability. However, many of these benefits are in the long-term.

Solidaridad's approach seeks to nudge farmers towards the adoption of better practices by providing short-term, tangible incentives combined with actionable recommendations for behaviour change. Any actor in the value chain will be able to invest directly, in the form of incentives and rewards, in improving smallholders' sustainability performance.

To make this happen, Solidaridad will leverage its existing app [Farming Solution](#), which enables farmers to record and share vital information on their farming practices. The app will be tied to an incentives and rewards mechanism, enabling farmers to earn and exchange "engagement points" for services and get compensated for their efforts. Farmers will access information and services needed to improve, get recognised for their progress and be encouraged to share their best practices to learn together.

#### **Expected outcomes**

- A user-friendly digital tool accessible to all sugarcane farmers in the selected countries, and replicable in other producing regions.
- A self-sustaining ecosystem connecting companies and other value chain actors with farmers through more direct investment and communication pathways.
- Increased uptake of sustainability practices in line with the Bonsucro Smallholder Standard.
- Higher contribution of supply chain partners to smallholder farmers' sustainability improvements.

## Name of the project: Monitoring network for efficient use of water and pesticides in sugarcane production

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**Call for proposals theme:** Building innovative approaches to reduce greenhouse gas emissions or improve water stewardship in sugarcane farming and milling

**Project lead:** [Raízen](#) / [Pulse Hub](#)

**Co-lead:** [Arable](#)

**Grant awarded:** £13,002.57

**Project budget:** £21,670.94



Raízen is an integrated energy company and one of the world's leading sugarcane processing company. It manages an agricultural operation that involves 1.3 million hectares of cultivated area. In 2011 it became the first organisation in the world to be [Bonsucro certified](#), with its plant in Maracá in São Paulo state, Brazil. Currently, 24 of its 31 bioenergy parks in operation are Bonsucro certified.

Pulse is Raízen's hub for open innovation and development of projects with start-ups for the agricultural sector.

The project is run in partnership with Arable, a US-based start-up that creates technological solutions for plant and weather monitoring.

### **Purpose of the project**

Local climates have a big impact on the success of agricultural production. The Brazilian sugar-energy sector has been facing major challenges with prolonged droughts and severe frosts in the Center-South region. This situation threatens producers, the bioenergy sector, and the communities financially dependent on the activity.

Raízen/Pulse's project promotes sustainable sugarcane production with a rational use of resources. The objective is to test, validate, and scale a monitoring network for efficient use of water and pesticides. This monitoring network will use data from in-field sensors and data analysis to support producers to most efficiently use their irrigation and pesticide application in line with weather pattern data. Producers will be able to access this data via the Arable web app or the API.

The Arable solution streamlines how vast amounts of in-field data can be collected and used to improve the productive, financial, and ecological outcomes of farming at a local and global level.

It aims to:

- Help producers better manage their production according to the microclimate and mitigate climate risks
- Reduce production costs and economic losses
- Future-proof the bioenergy sector in Brazil and contribute to the energy transition.

### **Expected outcomes**

Better management of crops and resources e.g., improved use of input such as pesticides and water, identification of best period for planting, water stress mitigation techniques.

Continuity of sugarcane producers' economic activity, through the reduction of planting failure, loss and risks.

Economic empowerment for the region, with the generation of revenue from the production of commodities that are raw materials for bioenergy, biofuels and food (sugar, energy, ethanol).



## Name of the project: Reduction of global warming through the production of sugarcane in Mexico

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**Call for proposals theme:** Building innovative approaches to reduce greenhouse gas emissions or improve water stewardship in sugarcane farming and milling

**Project lead:** [Biofábrica Siglo XXI](#)

**Co-leads:** [Coca-Cola de México](#) and [Unión Nacional de Cañeros, A.C. – CNPR](#)

**Grant awarded:** £30,000

**Project budget:** £45,003



Industria  
Mexicana



Unión Nacional  
de Cañeros A.C.

Biofábrica Siglo XXI is an agro-biotechnological company located in Mexico. It has developed biofertilisers to encourage an ecological, sustainable, and profitable agricultural model.

The project is run in partnership with Coca-Cola México and Unión Nacional de Cañeros, A.C. – CNPR, the leading canegrowers organisation in Mexico.

### **Purpose of the project**

Biofábrica and its partners want to offer canegrowers more sustainable and proven sugarcane production models to:

- Improve the way sugarcane is produced, to turn it into a Regenerative Agriculture that allow soil to be revitalised and capture carbon.
- Develop farmers' knowledge about their soil and production systems overall.
- Increase farmers' productivity and profitability.

The project is tackling multiple environmental issues, such as greenhouse gas (GHG) emissions from burning and the use of chemical fertilisers, soil degradation, and crop resilience to the effects of climate change such as more frequent droughts.

It will increase sugarcane producers' awareness of sustainable practices and build capacity to implement them.

### **Expected outcomes**

- A more profitable and sustainable sugarcane production model, using beneficial microorganisms and best agricultural practices.
- A well-articulated technology transfer model, through a series of activities and dissemination materials for growers, agricultural technicians, and other actors who can contribute to the scalability of the model.
- Carbon sequestration hard data, resulting from evaluation and follow up, through reports from Biofábrica's evaluation and follow-up methodology.

## Name of the project: Human Rights Due Diligence toolkit for sugarcane mills

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**Call for proposals theme:** Collective action to strengthen human rights and promote decent work in the sugarcane sector

**Project lead:** [Proforest](#)

**Co-leads:** [Imaflora](#), [Nestlé](#), [General Mills](#) and [Barry Callebaut](#)

**Grant awarded:** £150,000

**Project budget:** £300,000



Proforest is non-profit group that supports companies, governments, civil society and other organisations to work towards the responsible production and sourcing of agricultural and forest commodities.

The project is run in partnership with Imaflora, a Brazilian NGO with a mission to encourage socio-environmental changes in forestry and agriculture, and end-user companies, including Nestlé, General Mills and Barry Callebaut.



**Nestlé**



### Purpose of the project

Proforest, Imaflora and Nestlé will develop and implement a systematic approach to embed Human Rights Due Diligence\* (HRDD) in sugarcane mills' own operations, their suppliers and service providers, through a collaborative approach and stakeholder engagement.

This will be carried out in four steps:

1. Creation of an HRDD toolkit\*\* with guidance for mills on the practical steps of the due diligence process. It will focus on the Brazilian context and consider regional differences between the northeast and southeast of the country.
2. Development of tools for the HRDD implementation process. This will include a template and guidance on the development of a risk saliency matrix and checklists for on-the-ground verifications.
3. Capacity building on the guidance and tools in the HRDD toolkit to mills, producers, and service providers, via mills and producers' associations in the northeast and southeast regions.
4. Piloting the guidance and tools with 2 mills and 2 producers' associations (from the southeast and northeast).

Through this project, Proforest and its partners will provide practical tools for the interpretation of the UNGPs and the OECD guidelines, which are now part of Bonsucro's Code of Conduct for members, for the Brazilian sugarcane sector.

A tailored framework relevant to the sugarcane sector and regional context will allow for practical implementation guidance, reflecting the sector and region-specific salient issues. This project will focus on building a sectorial reference in Brazil on how to monitor and strengthen respect for human rights in the sugarcane supply chain, by setting a common reference for the Brazilian sugarcane sector on the HRDD process, with the potential of expanding to other regions and commodities.

*\*Human Rights Due Diligence is a process for identifying, preventing, mitigating, and accounting for human rights impacts. This includes both actual impacts occurring in the present and potential impacts that could occur in the future. Source: [Business and Human Rights Resource Centre](#)*

*\*\*The toolkits are a guide to the various initiatives and tools available to help decouple commodity production and trading from deforestation, conversion of native vegetation and human rights violations. For more information: [Our toolkits – Proforest](#)*

### **Expected outcomes**

- Practical resources and guidance on HRDD to identify real and potential human rights impacts in the supply base.
- Strengthened ability to address worker's rights and other social issues in sugarcane production and processes (e.g., working conditions, recruitment practices, adequate pay, basic rights, child and forced labour, gender equality, discrimination and harassment, conflicts with Indigenous Peoples and Local Communities).
- Reduced risk in sugarcane volumes purchased from Brazil.
- Compliance with current and upcoming relevant legislation in the US, Europe, Canada, and Japan.

## Name of the project: Using digital tools and multi-stakeholder engagement to improve human rights due diligence

**Call for proposals theme:** Collective action to strengthen human rights and promote decent work in the sugarcane sector

**Project lead:** [Unilever](#)

**Co-leads:** [The Coca Cola Company](#), [International Organization for Migration](#), [Diginex Solutions](#)

**Grant awarded:** £150,000

**Project budget:** £820,608.77

*Photo at the top of the page: Migrant workers in an agricultural farm in Mae Sot, Tak Province.*

*Photo by IOM/ Javier Vidal*



A public-private shared value partnership for the achievement of Sustainable Development Goals (SDGs), especially SDG 8: Decent Work and Economic Growth; SDG 10: Reduce inequality within and among countries, SDG 5: Gender Equality and Women's Empowerment, between the global consumer goods manufacturers Unilever and the Coca Cola Company, the International Organization for Migration (IOM) – the leading intergovernmental organisation within the UN system promoting humane and orderly migration – and impact tech business Diginex, which uses blockchain technology to help organisations address ESG and sustainability issues.

### **Purpose of the project**

This project aims to address the high prevalence of forced labour and gaps in respecting migrant workers' rights, as well as gender discrimination (such as wage gaps, unequal representation, lack of access to social security, and incidents of sexual harassment) that affect men and women workers in the sugar value chain.

To tackle the root causes of these issues, the partners will use impact tech and participatory worker engagement models with vulnerable migrant workers and lower tier suppliers to enhance transparency and strengthen Human Rights Due Diligence (HRDD) systems.

The project will combine IOM’s Participatory Rural Appraisal (PRA)\* approaches, Diginex’s digital worker and employer tools ([LUMEN](#) and [APPRISE](#)), with Unilever’s and The Coca Cola Company’s economic leverage. This will lead to the development of an operational worker engagement model that is responsive to the needs of rural and vulnerable populations.

Effective and meaningful engagement of migrant workers through the PRA methods will help stakeholders better understand how gender, migration status and/or the intersectionality of the two, impact the risk of labour exploitation.

This will inform a migrant and gender-centred public-private dialogue with key stakeholders (including civil society) on required changes in policies and practices at the national and sectoral level.

Moreover, this intervention can positively impact the sugarcane sector, especially as the world defines “the new normal” following the COVID-19 pandemic.

*\*Participatory Rural Appraisal (PRA), recently renamed Participatory Learning for Action (PLA), is a methodological approach that is used to enable farmers to analyse their own situation and to develop a common perspective on natural resource management and agriculture at village level.*

Source: [Better Evaluation](#)

#### **Expected outcomes**

- Better understanding of the root causes of human rights issues among sugarcane workers, with a focus on migrants and women employed in Unilever and Coca-Cola supply chains.
- Improved remediation of salient human rights issues and migrant worker grievances in Unilever and Coca-Cola supply chains.
- Strengthened Human Rights Due Diligence systems for better identification, prevention, mitigation and remediation of salient human rights issues.
- Vulnerable workers participate in Human Rights Due Diligence (300-500 workers across Thailand and India)
- Royal Thai Government and other key stakeholders gain migrant worker-centered evidence to inform and improve national legislation.

## **Name of the project: Driving decent work and safer working conditions for sugarcane farmers in Eswatini through technology**

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**Grant awarded:** £50,000 (innovation grant)

**Project budget:** £75,000

**Call for proposals theme:** Human rights and decent work

**Project lead:** The Coca Cola Company

**Co-leads:** [Eswatini Sugar Association](#), [Partner Africa](#)

The Coca-Cola Company has partnered on this project with the Eswatini Sugar Association and Partner Africa.

The (ESA) is an umbrella body that brings together Eswatini sugarcane growers and millers. It is responsible for marketing and selling all sugar and molasses produced in the country. Its services include agricultural research, cane testing, warehousing, distribution, marketing, and policy advocacy.

Partner Africa is a specialist business and human rights NGO that provides services to clients following the United Nations Guiding Principles. Partner Africa has expertise in social research in Africa and participatory approaches to engage with workers and community members to understand salient human rights risks.

### **Purpose of the project**

Working conditions in Eswatini's sugarcane industry are often physically demanding and hazardous, with risks such as injuries, exposure to harmful chemicals, and heat-related illnesses. The project aims to address these concerns and improve health and safety, strengthen labour rights and foster a more just, inclusive and sustainable sector.

Over 12 months, about ten workshops will be delivered to small-scale farm workers, on themes including health and safety, sustainable practices and grievance mechanisms. Personal Protective Equipment (PPE) will be distributed to 300 farm workers.

The project will leverage digital technology, diginexAPPRISE, a worker survey tool that allows workers to provide confidential and anonymous feedback on critical issues that may not be identified by standard social audits.

The objective is for workers from all backgrounds and literacy levels to respond and raise issues honestly. They will be offered two ways of accessing the tool: remotely, via a survey link and a QR code, or through a mobile device.

Data collected through the project's activities will be analysed and prepared into reports to demonstrate trends and particular concerns or violations. The employers and supply chain actors will be supported by the project partners in building capacity of staff and workers, as well as working collectively towards improving human rights and decent working conditions.

## **Expected outcomes**

- Valuable insights and data on the root causes of labour and human rights issues.
- An estimated 1,000 farm workers trained on safety and sustainability practices enhancing overall industry standards. Through a “Train the Trainer” program, 100 champions will be trained and who will then be expected to train at least 10 people each during the 12-month period.
- PPE will be given to an estimated 300 farm workers, improving individual safety and health.
- Engagement of an estimated 1,000 workers in grievance mechanisms.



## Name of the project: Protecting workers in a changing climate in Diageo's rum supply chain

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**Grant awarded:** £150,000 (impact grant)

**Project budget:** £223,566

**Call for proposals theme:** Human rights and decent work

**Project lead:** Diageo

**Co-leads:** La Isla Network, Alcoholes Finos Dominicanos, West Indies Rum Distillery

[Diageo](#) is an alcoholic beverage company that produces spirits and beer. Many of its brands source sugarcane throughout Central America and the Caribbean, particularly within its rum supply chains. The project is run with [La Isla Network](#) (LIN), a non-profit organisation that works to prevent heat related illnesses, injuries and deaths, as well as other occupational safety and health risks facing labour forces. There are two principal partners in the supply chain, which is West Indies Rum Distillery in Barbados and Alcoholes Finos Dominicanos in the Dominican Republic.

### Purpose of the project

More than one billion workers across the globe already experience heat stress at temperatures above 35°C<sup>1</sup> and unless timely action is taken, more than 4 billion people living in hot areas will experience negative health and safety effects and suffer from reduced work capacity in the course of the twenty-first century.<sup>2</sup> One of the perils of working in high heat is chronic kidney disease of non-traditional causes (CKDnt). CKDnt is the leading or second leading cause of death of men between 18-45 in the cane producing regions of Central America and Mexico<sup>3</sup>. While the sugar industry is undoubtedly affected, it has the opportunity to be a leader in addressing the issue.

Through this initiative, Diageo has partnered with La Isla Network to determine the current levels of heat related risk in its supply chain, and address them utilising LIN's Triple-A approach:

- Assess, where they assess the existing policies, procedures and protocols;
- Address, where they address the issues and provide protocols to close the gaps;
- Assist, where they assist in implementing the changes to produce sustainable change.

This is done by making changes in not just the harvesting and milling of the sugarcane, but the organisational management. The net result is a reduction of harm for the most at-risk workers in the supply chain, improved productivity, a positive return on investment (ROI) and improved access to remediation for those who have already suffered harm.

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<sup>1</sup> James W Smallcombe, Josh Foster, Simon G Hodder, Ollie Jay, Andreas D Flouris, George Havenith, 2022, Quantifying the impact of heat on human physical work capacity; part IV: interactions between work duration and heat stress severity, International Journal of Biometeorology, 66(12):2463-2476. <https://pubmed.ncbi.nlm.nih.gov/36197554/>

<sup>2</sup> Kjellstrom, T., Briggs, D., Freyberg, C., Lemke, B., Otto, M., & Hyatt, O. (2016). Heat, human performance, and occupational health: a key issue for the assessment of global climate change impacts. Annual review of public health, 37, 97-112.

<sup>3</sup> Correa-Rotter, Ricardo, Catharina Wesseling, and Richard J. Johnson. "CKD of unknown origin in Central America: the case for a Mesoamerican nephropathy." American journal of kidney diseases 63.3 (2014): 506-520.

LIN's Rest-Shade-Hydration-Sanitation (RSH-S) intervention at Ingenio San Antonio in Nicaragua – which has become a centre of excellence – has reduced heat-driven acute kidney hospitalizations of ISA workers by 94% while generating a ~27% ROI for the company. Diageo's rum suppliers have been presented with those impacts and are eager to make those changes too.

The outcomes of this project will embed best-practices in heat stress management and the prevention of other occupational injuries and illnesses throughout Diageo's rum supply chain.

**Expected outcomes**

- Stronger and safer working conditions for workers in sugarcane farms and mills, resulting in lower occurrence of occupational injuries and illness, like CKDnt
- Higher productivity and return on investment for producers, driving long-term engagement from leadership
- Healthier and thriving workers the community, positively impacting families and communities with improved income

## Name of the project: Sowing water, harvesting life

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**Grant awarded:** £50,000 (innovation grant)

**Project budget:** £87,944.86

**Call for proposals theme:** Water stewardship

**Project lead:** Ingenio San Antonio

**Co-leads:** Compañía Licorera de Nicaragua S.A., Comité Nacional de Productores de Azúcar (CNPA)  
Ingenio San Antonio is a modern agroenergetic mill dedicated to the sustainable production of clean energy, bioethanol, sugar, and molasses.

The project is run in partnership with [Compañía Licorera de Nicaragua](#), a producer of rum and liquors from molasses, and [CNPA](#), an industry organisation that brings together the four sugar mills in Nicaragua to promote the country's sugarcane sector at national and international levels.

### Purpose of the project

The 'Sowing water, harvesting life' project aims to promote sustainable use of water resources and mitigate the effects of climate change. This will be done through innovative practices of reforestation, soil conservation, and water harvesting in the areas surrounding Ingenio San Antonio (ISA), a sugar mill owned by Nicaragua Sugar Estates Limited.

The initiative aims to establish a close collaboration with local producers to improve the stewardship of water resources and drive positive impacts at the watershed level. The implementation of innovative practices will significantly increase surface water infiltration, replenishing groundwater aquifers\* to ensure water availability for local communities and long-term irrigation of sugarcane plantations.

It will focus on three main areas:

- **Demonstrate good practices (e.g. zoning, reforestation, gully erosion control, water harvesting, surface reservoirs) to small and medium producers:** a model farm called 'La Paciencia' and five local farms will serve as spaces for demonstration and knowledge transfer.
- **Build knowledge and skills among these producers:** a learning circuit based on successful experiences will be established. It will use the '[Farmer Field Schools](#)' (FFS) model as a participatory methodology for rural training.
- **Create a monitoring and impact and evaluation system:** using global climate observation tools, climate data from weather stations and rain gauges of ISA, a system that tracks and measures impact will be developed. Reports will be generated and shared with communities, institutions and other interested parties.

\*a body of permeable rock which can contain or transmit groundwater.

### Expected outcomes

- Small and medium sugarcane producers see water stewardship practices and their impact firsthand...

- ...and are equipped to replicate them and become water champions in their own operations.
- The sugar sector in Nicaragua manages water resources more sustainably.

## **Name of the project: Strengthening and connectivity of protective ecological connectivity corridors for the sustainable management of water resources in the hydrographic basin of the Amaime river, Valle del Cauca, Colombia**

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**Grant awarded:** £225,000 (impact grant)

**Project budget:** £324,987

**Call for proposals theme:** Water stewardship and Climate adaptation

**Project lead:** Manuelita S.A.

**Co-leads:** Colombian Sugarcane Research Center – CENICAÑA, RG & CIA SAS, Association of Water Users of the Amaime and Nima Rivers – Asoamaime, Asociación de Usuarios de las Aguas Superficiales y Subterráneas de la Cuenca del río Bolo – ASOBOLO

[Manuelita](#) is an agribusiness company headquartered in Colombia. Its products include refined sugar, ethanol, palm oil, biodiesel, and fruits and vegetables.

[CENICAÑA](#) is a non-profit that focuses on research, technology transfer and specialised services to support the development, competitiveness and sustainability of the Colombian sugarcane agroindustry.

[RG & CIA](#) is a producer and supplier of Manuelita, farming mostly sugarcane.

[Asoamaime](#) is an NGO that works to protect the Amaime river basin in Colombia.

[ASOBOLO](#) is an NGO working to protect water resources of the Bolo river and Vilela stream.

### **Purpose of the project**

This project sets out to establish ecological corridors in vital river basins, enhancing the flow of wildlife while restoring natural ecosystems in designated Strategic Environmental Areas.

Specifically, it focuses on the Amaime river basin, where the project partners will create and rehabilitate corridors within critical sections of the riparian strip\*. Their goal is to bolster ecosystem services, such as water capture, infiltration, and retention, which will positively impact water supply, flow regulation, and water quality. The initiative will be piloted in the Bolo river basin, on El Porvenir farm in Pradera, Valle del Cauca.

The project will also use nurseries to support the proliferation and recovery of native species, expanding 12 existing community-run nurseries and establishing two main ones. By collecting seeds and propagating 30,000 native plant species each year, the project aims to rescue three endangered or critically endangered plant species: Black cedar, Xylopia, and Wild Cashew.

Additionally, there will be a focus on eight plant species recognised by the community for their significant ecosystem value and their declining numbers in the region.

To protect pollinators, especially bees, the project partners will introduce ten beehives and cultivate melliferous tree species. This will help to enhance habitats for bee conservation, which, in turn, assists in maintaining the ecosystem balance and supporting pollinator populations in the area. The project will also establish a comprehensive hydrological monitoring network to track flow, precipitation and water quality in the basin. This will provide critical insights into the basin's regulation capacity, helping to make informed conservation decisions. Efficient water management in agriculture will be key to reducing the strain on water resources and improving the profitability of local producers. The project will enhance irrigation efficiency in selected production units.

\*A riparian area is the interface between land and a river or stream.

**Expected outcomes**

- Stronger engagement and collaboration between multiple local actors around water resources conservation.
- Sugarcane growers are equipped to make efficient use of water resources, especially for irrigation.
- Enhanced biodiversity in the Amaime river watershed.

## Name of the project: GeRa Cana – Management and traceability of sugarcane production to rural producers

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**Grant awarded:** £50,000 (innovation grant)

**Project budget:** £76,400

**Call for proposals theme:** Climate adaptation

**Project lead:** [Fundação Solidaridad](#)

**Co-leads:** [ORPLANA](#), [APMP Bioenergia](#)

Solidaridad is an international civil society organisation with over 50 years of experience in developing solutions to make agricultural value chains more sustainable and inclusive. In Latin America, it currently operates projects to promote the adoption of good practices in sugarcane in Brazil, Colombia, Argentina, Uruguay, Mexico, El Salvador, and Honduras.

The project is run in partnership with [ORPLANA](#), the umbrella organisation for cane producers associations in Brazil, and [APMP Bioenergia](#), a non-profit civil society association, that brings together producers of raw materials for the bioenergy industries.

### Purpose of the project

The GeRa Cana project aims to reduce the carbon footprint of sugarcane production while reducing operational costs, increasing traceability, and increasing farmers' income.

This project underscores the urgent necessity to support these farmers' participation in Brazil's regulated carbon credit market. The reason this is important is that the economic sustainability of this industry is closely tied to managing its environmental impact. Achieving that requires tracking carbon footprint throughout the sugarcane supply chain. This not only provides valuable data for managing production but also helps reduce operational costs and bottlenecks, ultimately leading to higher income for the farmers involved.

GeRa Cana aims to facilitate this by:

1. Building capacity of technical teams of the associations, farms and their families, through administrative and economic management of the agricultural production, use of digital tools for management and measurement of the carbon footprint, and fulfillment of the criteria of carbon certification programmes, mainly RenovaBio;
2. Offering digital tools to the APMP associates and technicians for free;
3. Offering APMP's technical support to associates participating in the project.
4. Analysing information on sugarcane production and developing an action plan to improve the management of the farmers associated with APMP.

Initially, the programme will be offered to at least 10 associates of APMP Bioenergia, focusing on small farmers, who most need technical support from the association.

### Expected outcomes

- Improved operational management for APMP producers
- Better access to the carbon credits Brazilian regulated market for rural producers
- Greater awareness and understanding of best practices for reducing their carbon footprint



## Name of the project: Building smallholders' climate resilience in Pakistan's challenging soil conditions

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**Grant awarded:** £50,000 (innovation grant)

**Project budget:** £76,806

**Call for proposals theme:** Climate adaptation

**Project lead:** [SW Sugar Mills Limited](#)

**Co-leads:** [AgNovate Consulting Pvt. Ltd.](#), [Haidri Beverages Pvt. Ltd.](#), [PepsiCo Pakistan](#)

SW Sugar Mills is a manufacturer of high-food-grade refined white sugar in Central Punjab, Pakistan. The company receives its cane supply from an area of 13,000 hectares. By extracting a variety of by-products from the sugar production process, such as bagasse for electricity, molasses for animal feed and press mud as fertilisers, they have achieved a zero-waste usage of their by-products. The project is run in partnership with AgNovate, an international consultancy specialising in agricultural improvements and the only Bonsucro-licensed training provider in Pakistan, as well as PepsiCo Pakistan and its franchise company Haidri Beverages Pvt. Ltd, the country's largest beverage manufacturer.

### Purpose of the project

In Pakistan, the extent of climate change challenges in the sugar supply chain is enormous. Inefficient resource management, climate sensitivity, and a lack of adoption of sustainable practices create issues throughout the supply chain, from production to processing and distribution. This project will support sugarcane smallholder farmers with the adoption of climate-friendly agricultural practices. It tackles multiple sustainability challenges such as inefficient resource management, climate vulnerability, and adoption of sustainable practices among smallholder farmers. By addressing these issues, it aims to enhance resource efficiency, strengthen climate resilience, and promote sustainable farming practices.

This will be carried out through training and capacity building initiatives, including:

- Soil and water mapping, to inform customised input management, based on specific water and nutrient needs.
- Analysis of sowing techniques for sugarcane cultivation in saline soils to reduce input use, tillage and GHG emissions while improving productivity.
- Identification of sugarcane varieties that are best adapted to saline soils and irrigation in brackish\* water.
- Implementation of residue management to reduce input use, wastage and emissions while enhancing soil health.

### Expected outcomes

- Enhanced resource efficiency, including water, soil, inputs and by-products.

- Reduced climate risks in sugarcane farming and along the supply chain.
- Improved farmers' resilience to climate risks.
- Higher productivity, leading to financial benefits for farmers.

## Name of the project: Water for the future with small sugarcane producers in Ecuador

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**Grant awarded:** £50,000 (innovation grant)

**Project budget:** £69,801.87

**Call for proposals theme:** Water stewardship

**Project lead:** [Compañía Azucarera Valdez](#)

**Co-leads:** Valdez's producers, [Eco.Business Fund](#), [Banco Produbanco](#), Asociación de Productores de Mariscal Sucre

Valdez grows and processes sugarcane and its derivatives, including ethanol and electricity from bagasse. It's the second producer of sugar in Ecuador, with 26% of the market share. It obtained Bonsucro certification for its own plantations in 2022.

The initiative is run in partnership with a group of women producers from Mariscal Sucre, who will also be beneficiaries of the project.

Eco.Business Fund promotes business and consumption practices that contribute to biodiversity conservation, sustainable use of natural resources and climate change mitigation and adaptation, through financing and technical advice to financial institutions and businesses. Sugarcane is one of Eco.Business Fund's priority sectors.

Banco Produbanco is one of Ecuador's leading banks, committed to developing and strengthening green financing. The agro-industrial sector is a key part of its sustainability strategy and agenda. Asociación de Productores de Mariscal Sucre is a local group of small producers in Mariscal Sucre county.

### Purpose of the project

This project is part of Valdez's Sustainable Sourcing Programme, which supports and incentivises the adoption of sustainable practices among the company's suppliers.

It aims to implement methodologies for the sustainable management of water and climate resilience, and demonstrate their applicability, while empowering women smallholders.

The project will begin with technical research to identify the challenges related to water management among 23 farmers. Additionally, a gender-sensitive assessment will be carried out to identify specific challenges faced by women farmers and resulting opportunities.

Two women-led demonstration plots will be established to showcase selected eco-efficient practices for water management and climate resilience. It will host field visits and training sessions for smallholders. The plots will also enable project stakeholders to compare the impact generated by these practices on efficiency, productivity and soil health.

The project also aims to upskill Valdez's technicians and suppliers through a "training of trainers" approach. Ultimately, the programme aims to reach 400 suppliers.

Impact measurement will be a key part of the project; the partners will document and share results and impacts to encourage other sugarcane growers to adopt recommended sustainable practices. The impact assessment will also include gender-specific indicators.

**Expected outcomes**

- Improved understanding of climate risks and water-related challenges
- Perceived benefits of sustainability practices by farmers
- Farmers are better equipped to implement sustainable practices and manage water resources
- Better recognition of gender-specific needs and strengthened inclusion of women.