



Funded by the European Union



International Fine Cocoa Innovation Centre (IFCIC) Project

Consortium

Implementing partners:

- Cocoa Research Centre (CRC), University of West Indies, *Trinidad and Tobago (Project Coordinator)*
- Newer Worlds, *United Kingdom*
- Caribbean Fine Cocoa Forum, *Trinidad and Tobago*
- Jamaica Agricultural Commodities Regulatory Authority (JACRA), *Jamaica*

Budget

Total budget: €2,573,699.95
 EU contribution: €2,170,945.00

Duration

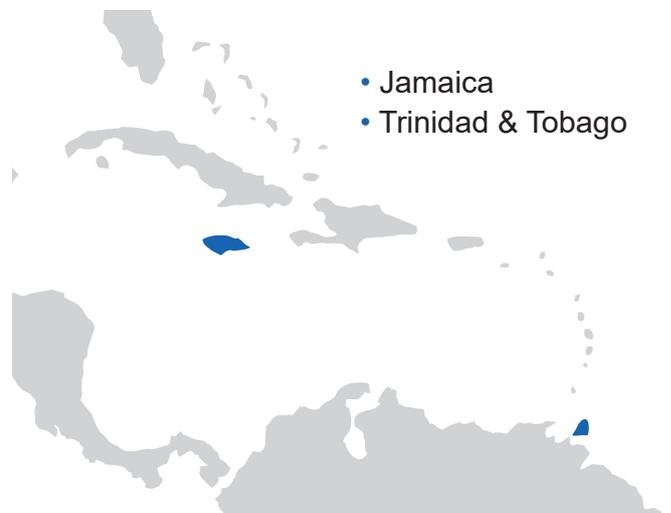
March 2014 – August 2018

Development challenge

The cocoa sector in Trinidad and Tobago and the Caribbean has been declining due to the following factors:

- Ageing farms and farmers, low farm productivity, high production costs, and labour shortages, resulting in unviable business models;
- A convoluted and long value chain, resulting in farmers receiving disproportionately small proportions of the value chain (5%);
- A lack of a technology transfer system to transfer information and new technologies from laboratory-to-farm-to-table.

Countries of intervention



Project approach

The IFCIC project was built on the approach of a triple helix model (university-public-private partnership), to develop and showcase smallholder innovations along the value chain, as well as provide training and technology services, support policy development, and attract public and private sector investment to support industry development on the establishment of a sustained cocoa industry.

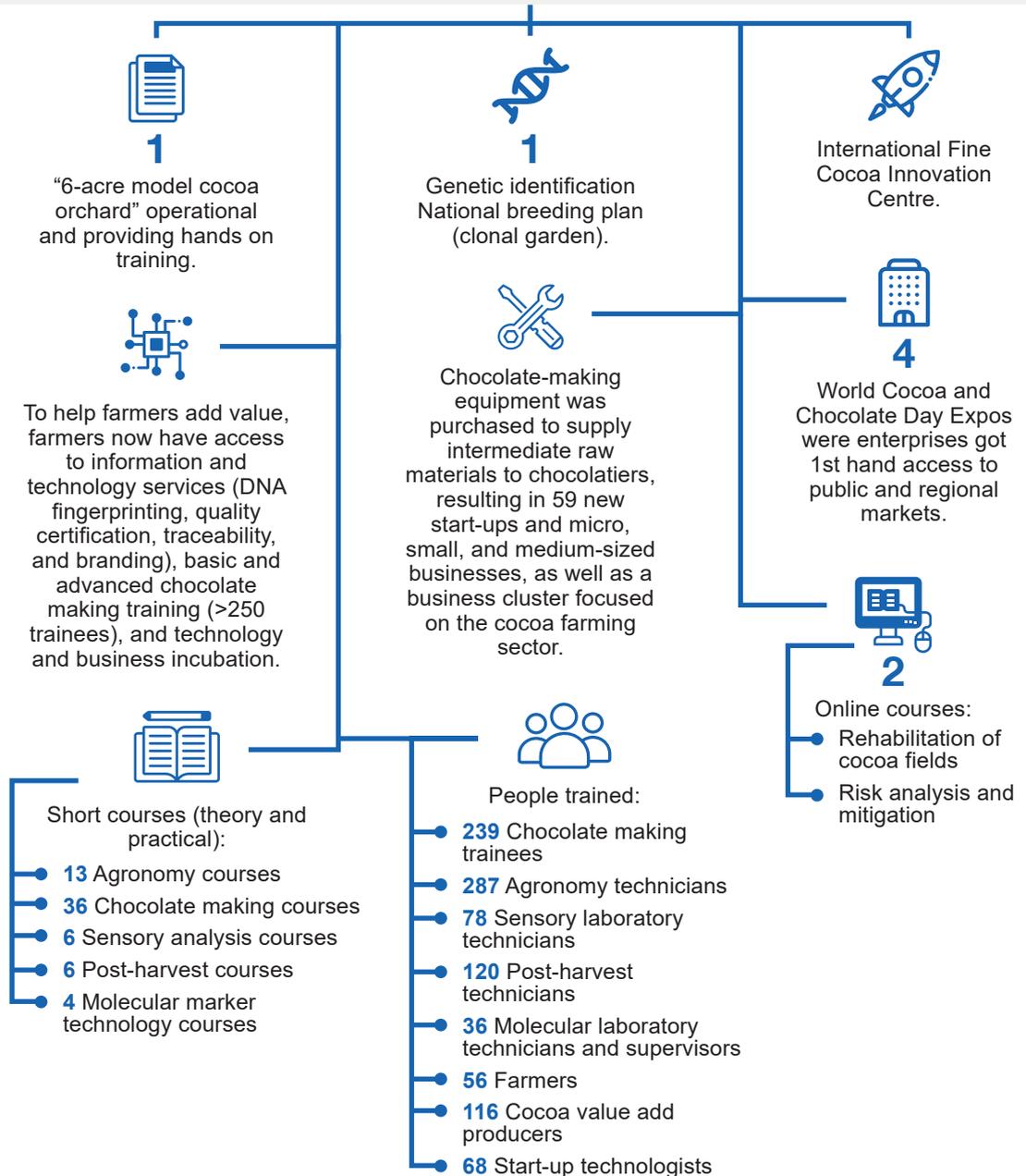
This approach helped the project to serve as a technology transfer interface. The IFCIC also used more nuanced approaches to cocoa orchard management and smallholder mechanisation enabled by research and development, resulting in higher yields and quality, as well as increased profitability.



Project results



Improved knowledge of scientists, researchers, farmers, government on a sustained cocoa industry through the technology transfer on the production of cocoa and manufacture of chocolate.



The establishment of an International Fine Cocoa Innovation Centre IFCIC.



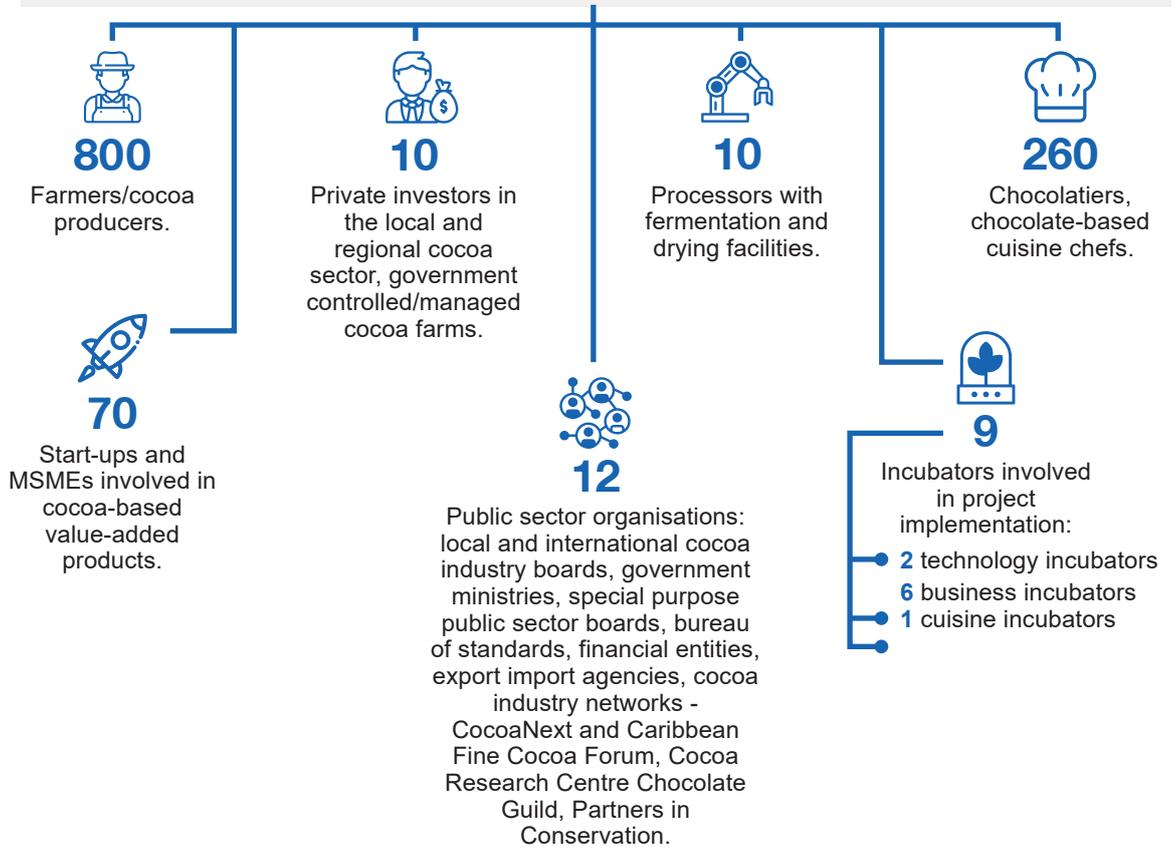
IFCIC's factory outlet sells its own branded chocolates as well as other value-added products, like chocolates from start-ups.



Project results (2)



Stakeholders Involved:



9 databases: Agro-ecological zones, Risk and constraints, Base survey of cocoa industry in Trinidad Tobago 2017, Cadmium contamination of soils and beans.



Soil fertility of cocoa soils, Flavour map of Trinidad and Tobago, DNA fingerprint, NIRS spectral fingerprint, Cost of production.



1 digital traceability platform.



8 videos: Cocoa Research Centre and IFCIC, Post-harvest processing, Beanto- bar production, Quality Control and certification, DNA fingerprinting, Cocoa pollination, Climate change and cocoa yields, Genebank.



Project results (3)



7 bulletins: IFCIC; Cadmium contamination and mitigation; Disease identification and management; Cocoa propagation, pruning and shade management; Quality management; Value addition; Post-harvest processing.



9 guidelines: Geographical indication based branding, Traceability of cocoa, SOP for quality laboratories, Quality certification of cocoa, SOP for DNA fingerprinting, Fidelity testing, Determination of ancestry of cocoa clones; Determining an effective population size for conservation; Determination of cadmium in cocoa beans and leaves.



3 protocols: DNA isolation for DNA fingerprinting, DNA fingerprinting using FLUIDIGM, NIRS analysis of cocoa samples.



2 manuals: Quality certification, Branding: 15 brand stories for farms.



6 policy briefs: Labour policy brief, Cocoa.



Industry Research and development needs.



National cocoa strategic plan and action plan, international cocoa flavour and quality standards, National and regional standards for cocoa quality, National and regional standards for cocoa products.



Impact

The IFCIC project has generated a successful transfer of science and technology on the production and development of DNA fingerprinting for the different cocoa varieties that has generated a change on the process and production of cocoa and manufacture of chocolate in Trinidad and Tobago as well as in Jamaica through its trainings and capacity building opportunities. The project has generated a new interest in the Cocoa sector across farmers, producers, chocolatiers, universities, government as well as private and public investors, due to the manufacture and commercialisation of intermediary products for MSMEs. IFCIC was proposed as one of five innovation centres improving the country's economic diversification, in the task of rehabilitating the cocoa industry.

\$24,200.00

revenue on the **Certification and traceability** 157 local business and 91 international business, and 5 traceability certifications.

\$90,777.00

revenues on:

- **Chocolate making training** 57 participants on Basic and 12 on Advanced courses;
- **Incubating technology** with 11 participants to the bean-to-bar chocolate makers;
- **Providing business incubation** to 72 stakeholders across the cocoa value chain.

On the technology transfer activities

IFCI has provide training sensory analysis and quality management to 10 organisations across the LAC region.

\$656,829.00

revenue from **Global ADN fingerprinting services** such as cacao accession, ancestry determination and fidelity studies, extended from two international companies to:

- 7 international companies;
- 3 regional institutions (2 from Haiti and 1 Dominican Republic);
- 4 international research organisations from Costa Rica, Honduras, Bolivia, UK and Peru;
- 7 company farms (Nicaragua, Guatemala, St Vincent, Thailand, Taiwan, Grenada);
- 3 government ministries Dominica, Trinidad & Tobago, and Honduras;
- 3 local farmers.

1 b2b focus group session with 60 farmers, value add processors, and government support agencies (2020).



Sustained Impact

The sustained impact of IFCIC has been massive in the role of knowledge transfer and incubator promoting the cocoa industry, and institutionally reinforcing. IFCIC has continue delivering services:

\$19,747.00

revenues on **branding assistance** to:

- 7 tree-to-bar;
- 7 bean-to-bar chocolate makers;
- 1 geographical indication branding.

\$80,000.00

funding from Global Challenges Research Fund (GCRF) of the UK Research and Innovation (UKRI) fund for the project "Changing cocoa beans for better chocolate" lead by the University of Nottingham.

\$150,000.00

funding from Compete Caribbean for Capacity Building and Applied Research in Cluster Development Best Practices in Dominica, Belize and St Lucia.

\$418,000.00

funding from Cargill Foundation promoting Cocoa & Chocolate innovative solutions.

On the **b2b contacts** the IFCI has facilitated 40 stakeholders across the cocoa value chain with 7 international bean buyers as part of the World Cocoa and Chocolate Day (2019).

\$950,000.00

funding from the European Cocoa Association (ECA), the Chocolate, Biscuits and Confectionery of Europe (CAOBISCO), and the Federation of Cocoa Commerce (FCC) join research Fund for the project "Mitigation of Cadmium (CD) Bioaccumulation in Theobroma Cacao L."

\$125,000.00

funding from Mars-Wrigley supporting Cocoa for Generations strategy.

\$60,000.00

subcontracting from Inter-American Institute for Cooperation on Agriculture (IICA) providing technical methodologies for cadmium mitigation.



Sustained Impact (2)

IFCIC have received funding for over € 5.8 million on 15 spin-off projects to support the cocoa industry.

\$350,000.00

from MOCCA (USDA-FAS) funding for project "Improving cadmium mitigation in LAC and conservation" on Honduras, EL Salvador, Nicaragua and Guatemala (completed).

\$751,893.00

funding from IDB-LAB (AIDB) for project "Improving Marketing and Production of Artisanal Cocoa from Trinidad and Tobago (IMPACTT)", linking small scale growers with high value markets required for sustainability and growth of the cocoa sector in Trinidad and Tobago, equipping growers with quality certification, chain of custody and branding.

\$125,000.00

funding from Lindt & Sprüngli promoting Lindt Home of Chocolate project.

\$67,000.00

from AVSF funding project delivering: DNA fingerprinting of genetic resources, cadmium mapping and mitigation, fertility mapping and nuanced approach to fertility management, postharvest quality management, certification and traceability (on-going).

\$120,000.00

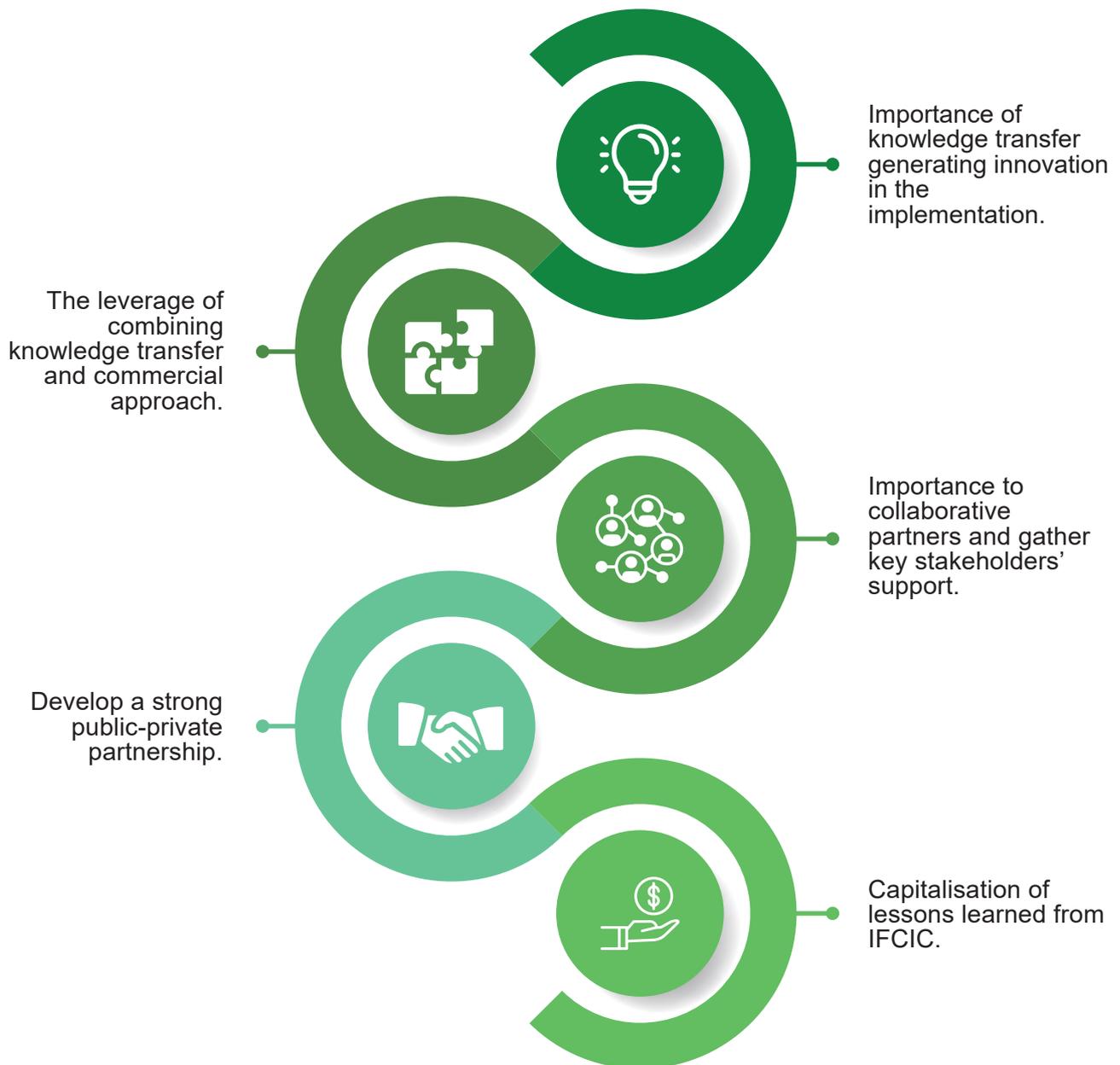
funding from the Trinidad and Tobago Research and Development Impact Fund (RDIFUND) for the project "Product, process and market innovations to support sustainable cocoa sector development for economic diversification."

\$1,100,000.00

funding from Mondelez for three projects on the cocoa industry.



Key lessons learned and best practices



His Excellency Peter Cavendish
The EU Ambassador to Trinidad and Tobago

"I think we would all agree that the Caribbean region holds great potential to be a major player in the international fine cocoa and chocolate trade and the work of the International Fine Cocoa Innovation Centre (IFCIC) is bringing us closer to that reality."