

Sugarcane Production at Terragri:

From Field to Spoon

7th February 2022

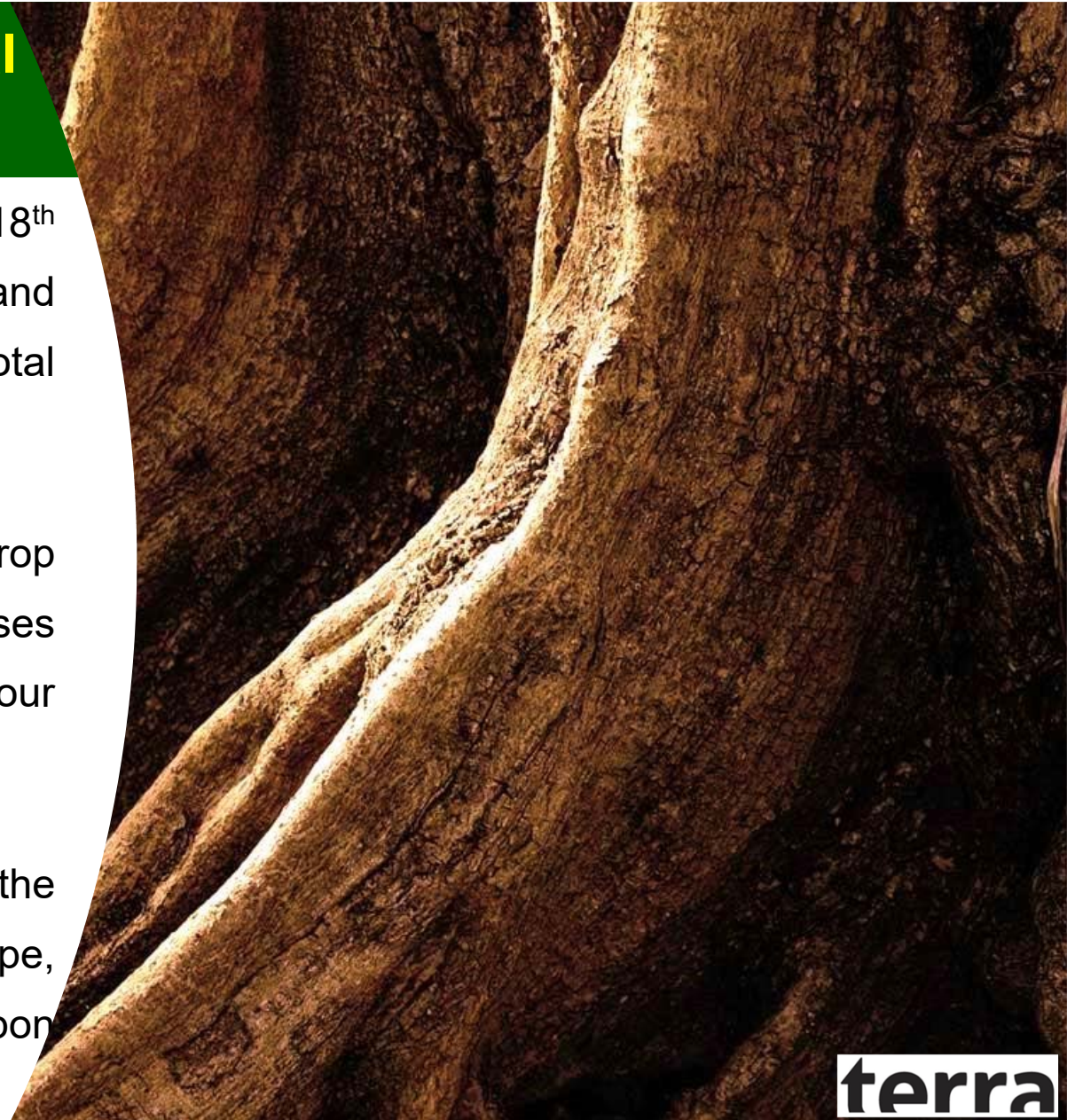
For the future. From 1838

terra



TERRA: Our Socio-Environmental Stewardship

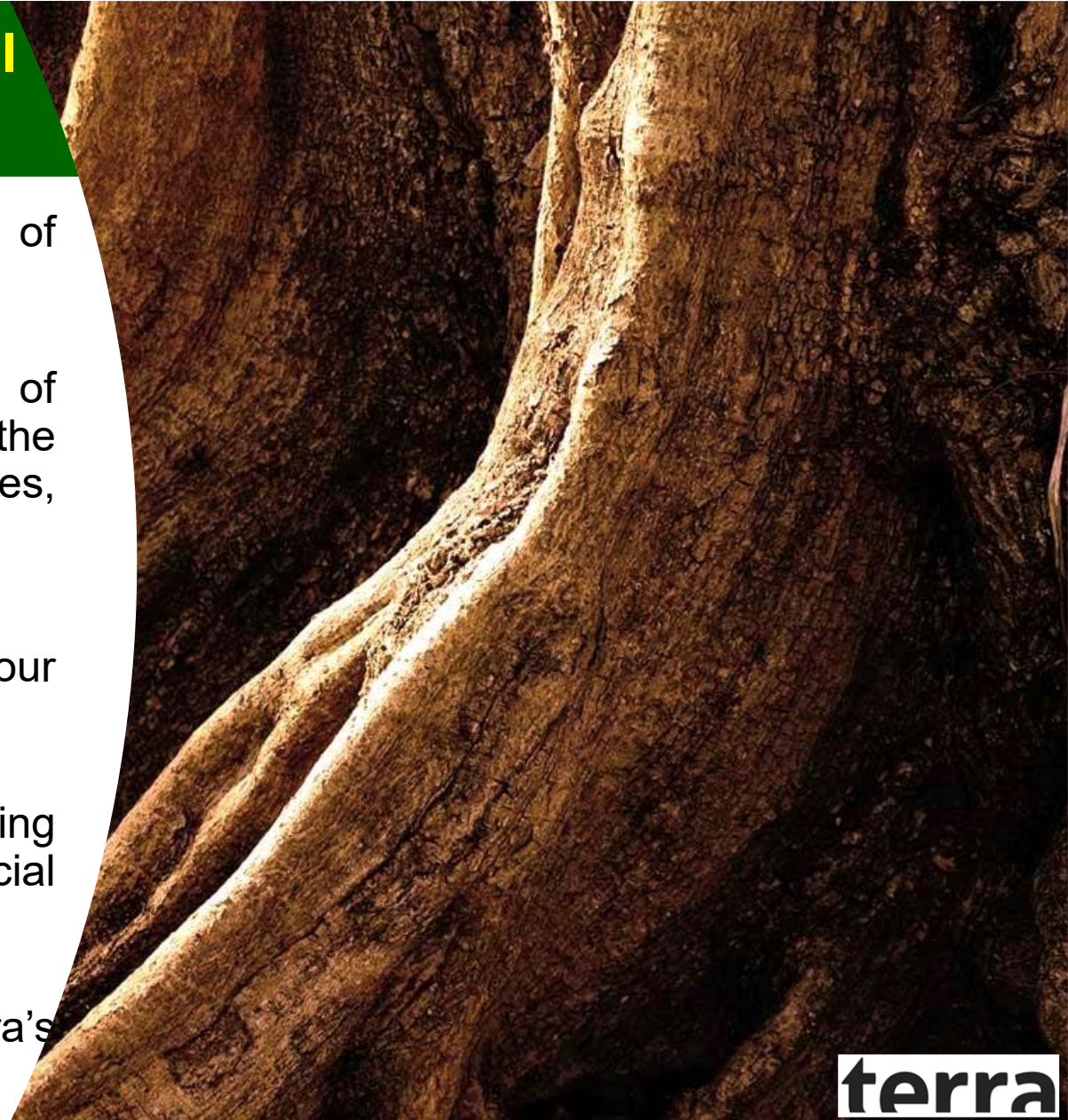
- Since its introduction in Mauritius in the 18th Century, sugarcane cultivation has expanded, and now covers 45,805 hectares, 22.5% of the total area of Mauritius
- Besides the economic value of sugar, crop hardiness against cyclones, drought and diseases explain why it is the main crop cultivated on our tropical island
- Concomitant edges of sugarcane as a crop are the authenticity that it brings to the island's landscape, deep root system that holds tightly soil, and carbon sequestration



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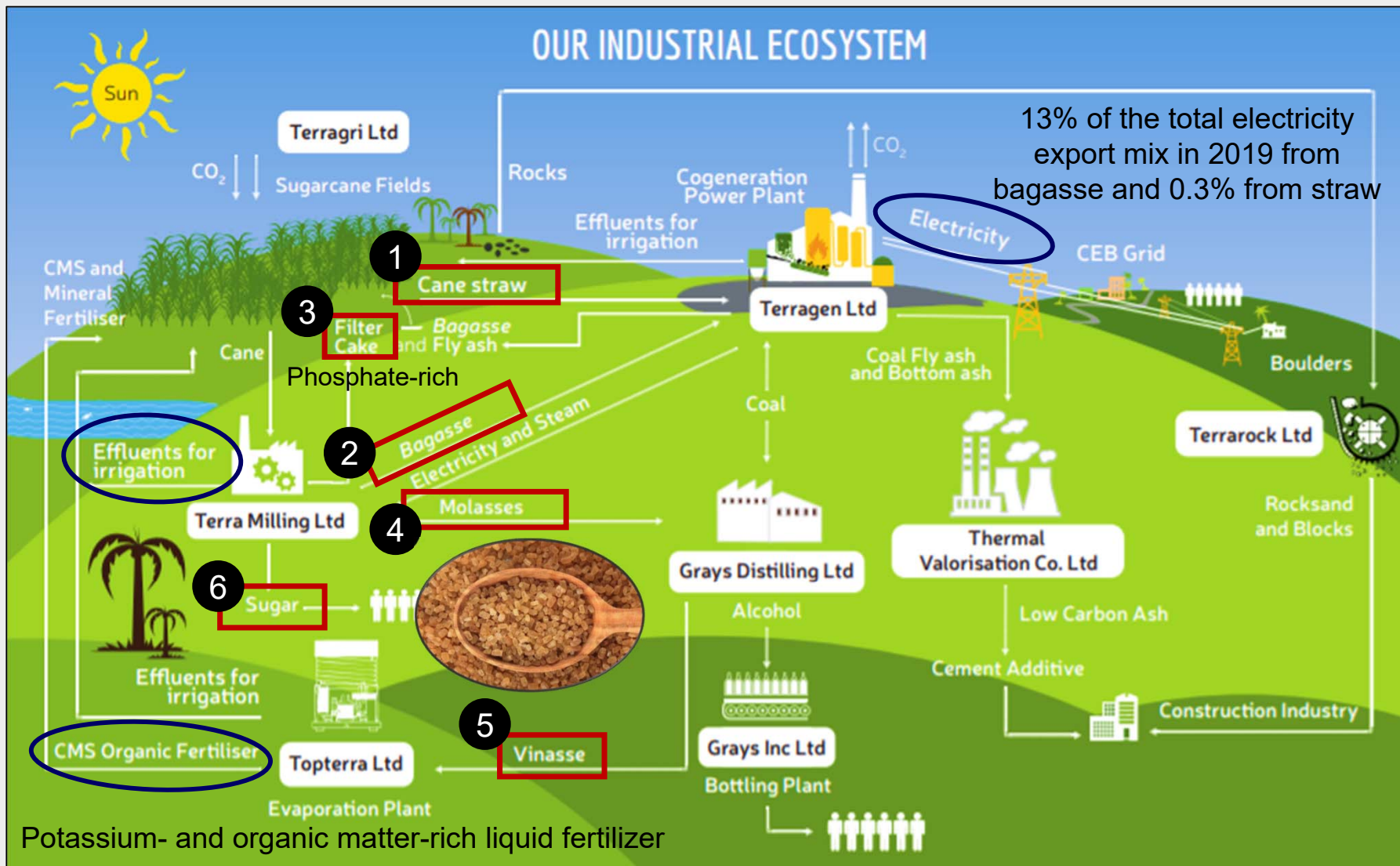
TERRA: Our Socio-Environmental Stewardship

- Terra has deep roots in the land and soil of Mauritius since 1838
- Agricultural activity, which is at the core of Terra's business model, depends on the availability and quality of natural resources, including land, water, and vegetation
- Ensuring ecological functioning is central to our value proposition
- Protecting the environment and ensuring development of people in natural & commercial environments are thus a strategic imperative
- Agricultural cluster is a key node of Terra's industrial ecosystem



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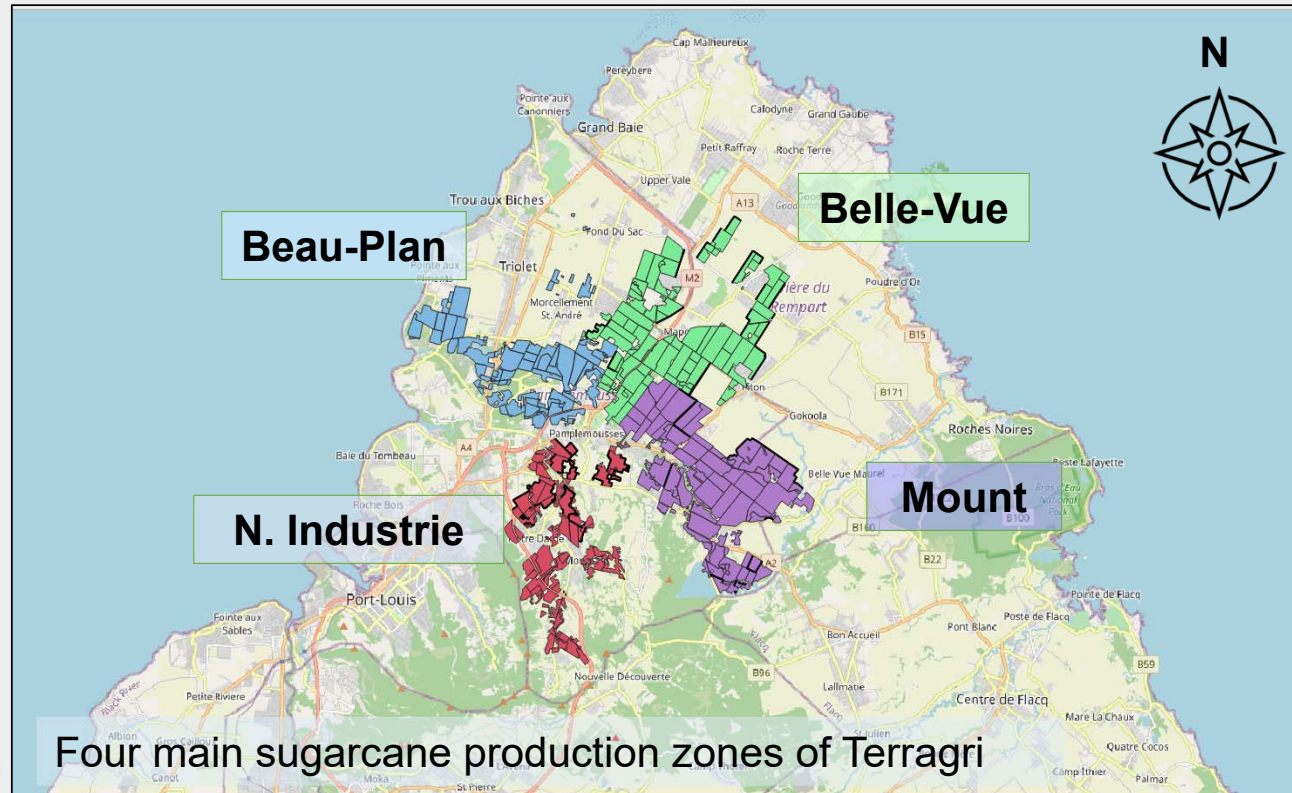
Sugarcane Production: A closed-loop resource flow system



Terragri Ltd: Natural and Human Capital

Cane

Our purpose is to be a global player in growing cane and manufacturing sugar, with a particular focus on specialty sugars.



Our natural capital

- 5,433 ha of sugarcane fields
- 327,705 tons cane produced
- 4,127 tons straw collected
- 118,000 tons bagasse

Our human capital

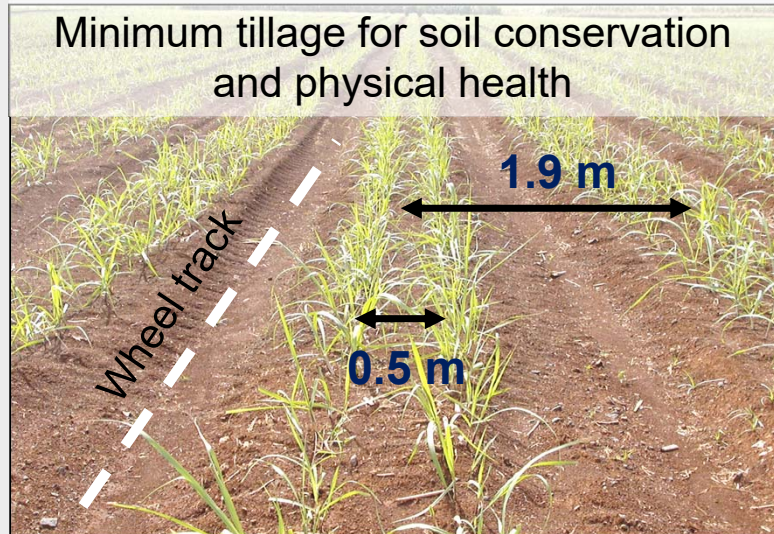
- 201 employees



Terragri Ltd: A Vision of Sustainable Development



Raw Materials for Sugarcane Production: **Fertilizers**



Doing more with less



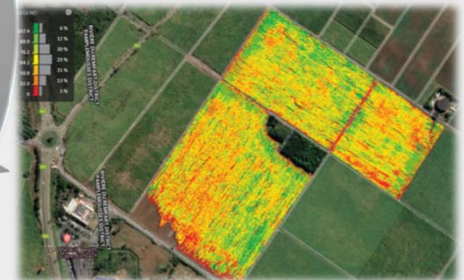
Variable
fertilizer
rate
application

Data
Collection

Data
processing



Yield
gradients
recorded by
harvesters



Yield map

Excel sheet

Fertilization Recommendations									
Field ID	Area (ha)	N (kg/ha)	P (kg/ha)	K (kg/ha)	Ca (kg/ha)	Mg (kg/ha)	S (kg/ha)	Zn (kg/ha)	B (kg/ha)
1	1.2	120	30	60	10	20	5	1	0.5
2	1.5	150	35	70	12	25	6	1.2	0.6
3	1.8	180	40	80	15	30	7	1.5	0.7
4	2.1	210	45	90	18	35	8	1.8	0.8
5	2.4	240	50	100	20	40	9	2.0	0.9
6	2.7	270	55	110	22	45	10	2.2	1.0
7	3.0	300	60	120	25	50	11	2.5	1.1
8	3.3	330	65	130	28	55	12	2.8	1.2
9	3.6	360	70	140	30	60	13	3.0	1.3
10	3.9	390	75	150	32	65	14	3.2	1.4

Precise fertilisation map



Raw Materials for Sugarcane Production: **Herbicides**

Green Harvesting – GPS & Traffic Control

Wheel tracks

Cane straw blanket after harvest



Use of cane straw to control weeds

Application of herbicides on cleared cane beds only = 25% less herbicide applied

No herbicide

Herbicides to be applied after weed emergence



High-clearance herbicide sprayer



Spot infestation of vine



Drone technology for weed detection after cane canopy closure



Raw Materials for Sugarcane Production: Fuel

- Optimising the efficiency of equipment at Terragri is a priority towards reducing our fuel consumption
- Investment in the fleet management tool *Naveo*
- We have prioritised the purchase of fuel-efficient machines and have redesigned our fields to enhance the efficiency of their operation

Size of a field at Terra

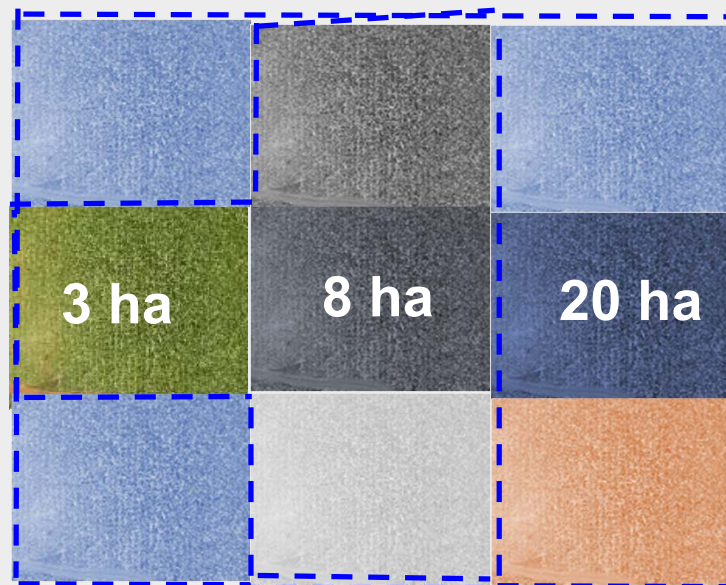
In 2008: 3 ha

In 2018: 8 ha

In 2019: 20 ha

x 2.7

x 6.7



Climate Change

Rainwater harvesting to face extended dry spells

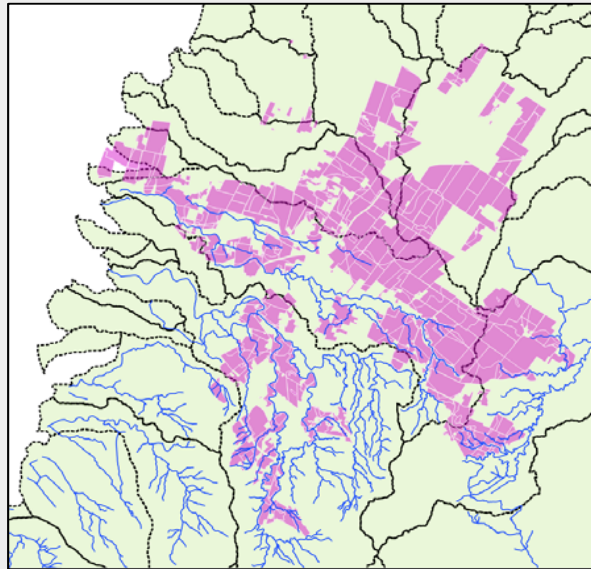
Pond under construction



Targeted result



Use of Digital Elevation Models (DEM) and geographical information systems for land planning, and soil conservation



- Informed waterway design based on flow axes and catchment areas
- Adaptive measure against flash floods and convectional rainfall
- Aim is to minimise soil erosion, and conserve soil fertility

People

- Having the right technical and leadership skills, diversity of experience, and a strong performance-oriented culture, is fundamental to Terra's ability to generate value
- Training to new technologies
- Coaching and continuous learning



Organic Sugarcane

- We have been investing in the research and development of organic sugar cane production, with the goal of contributing to the Mauritius Chamber of Agriculture's vision for 1,500 hectares of land to be converted to organic cane
- In 2019, 58 hectares were earmarked to evaluate organic itineraries of sugar cane production
- The evaluation is still up and running, and a second organic harvest completed in 2021



Thank you for your attention!

