(Convenience translation into English from the original previously issued in Portuguese)

GRANBIO INVESTIMENTOS S.A.

Independent auditor's review report

Individual and consolidated interim financial information
As at June 30, 2023

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Contents

Management report

Dear Shareholders,

In compliance with the legal and bylaw provisions, the Management of GranBio Investimentos S.A. submits the Company's individual and consolidated interim financial information for your appreciation, accompanied by the independent auditor's review report on the individual and consolidated interim financial information, prepared in accordance with Brazilian accounting practices, referring to the period ended June 30, 2023.

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INDEPENDENT AUDITOR'S REVIEW REPORT ON THE INDIVIDUAL AND CONSOLIDATED INTERIM FINANCIAL INFORMATION

To the
Management and Shareholders of
GranBio Investimentos S.A.
São Paulo - SP

Introduction

We have reviewed the individual and consolidated interim financial information of GranBio Investimentos S.A. ("Company"), included in the quarterly information, for the period ended June 30, 2023, which comprise the statement of financial position as at June 30, 2023, and the respective statements of income and comprehensive income for the three- and six-month periods then ended, and of changes in equity and cash flows for the six-month period then ended, as well as the corresponding notes.

The Company's Management is responsible for the preparation of the individual interim financial information in accordance with NBC TG 21 (R4), and for the preparation of the consolidated interim financial information in accordance with NBC TG 21 (R4) and with International Accounting Standard (IAS) 34 - Interim Financial Reporting, issued by the International Accounting Standards Board (IASB), as well as for the presentation of this interim financial information in accordance with the standards issued by the Brazilian Securities and Exchange Commission (CVM) applicable to quarterly information. Our responsibility is to express a conclusion on this interim financial information based on our review.

Scope of the review

We conducted our review in accordance with Brazilian and international standards for reviewing interim financial information (NBC TR 2410 and ISRE 2410 - Review of Interim Financial Information Performed by the Independent Auditor of the Entity). A review of interim financial information consists principally of applying analytical and other review procedures and making enquiries of and having discussions with persons responsible for financial and accounting matters. An interim review is substantially less in scope than an audit conducted in accordance with auditing standards, and does not provide assurance that we would become aware of any or all significant matters that might be identified in an audit. Accordingly, we do not express such an audit opinion.

Conclusion on the individual interim financial information

Based on our review, we are not aware of any fact that leads us to believe that the individual interim financial information included in the accompanying quarterly information has not been prepared, in all material respects, in accordance with NBC TG 21 (R4), applicable to the preparation of quarterly information, and presented in accordance with the standards issued by CVM.

Conclusion on the consolidated interim financial information

Based on our review, we are not aware of any fact that leads us to believe that the consolidated interim financial information included in the quarterly information referred to above has not been prepared, in all material respects, in accordance with NBC TG 21 (R4) and IAS 34, applicable to Quarterly Information, and presented in accordance with the standards issued by CVM.

Emphasis

Investment realization stage

We draw attention to Note 1 to the individual and consolidated interim financial information, which describes that the Company and its controlled companies have reported recurring losses on their operations and accumulated loss in equity amounting to R$ 776,683 thousand (R$ 712,290 thousand as at December 31, 2022) in the individual and consolidated statements. This situation is mainly due to the fact that the ethanol plant of the controlled company Bioflex Agroindustrial S.A. is currently in the stage of investments to reach its business capacity of continual operations and, consequently, the recoverability of the investments made in fixed assets and technology (intangible assets). Our conclusion is not qualified in respect of this matter.

Related-party transactions

We draw attention to Notes 7, 10 and 19 to the individual and consolidated interim financial information, which describe that the Company and its controlled companies maintain balances and transactions in significant amounts with related parties, according to the conditions described therein. Accordingly, the results of these operations could have been different if they had been carried out with third parties. Therefore, the accompanying individual and consolidated interim financial information should be read in this context. Our conclusion is not modified in respect of this matter.

Other matters

Statements of value added

The accompanying interim financial information includes the individual and consolidated statements of value added for the six-month period ended June 30, 2023, prepared under the responsibility of the Company's Management and presented as supplementary information for the purposes of IAS 34. These statements were submitted to the same review procedures followed for the review of the quarterly information, for the purpose of concluding on whether they are reconciled with the interim financial information and accounting records, as applicable, and if their form and contents meet the criteria defined in NBC TG 09 – Statement of Value Added. Based on our review, we are not aware of any fact that would lead us to believe that these statements of value added were not prepared, in all material respects, in accordance with the criteria established in this standard and consistently with the individual and consolidated interim financial information taken as a whole.

The accompanying financial information has been translated into English for the convenience of readers outside Brazil.

São Paulo, August 10, 2023.

BDO RCS Auditores Independentes SS Ltda.
CRC 2 SP 013846/O-1

Ricardo Vieira da Rocha
Accountant CRC 1 BA 026357/O-2 – S - SP

GRANBIO INVESTIMENTOS S.A.

Statements of financial position
June 30, 2023 and December 31, 2022
(In R$ thousand)

Assets		Parent Company		Consolidated	
	Note	06/30/2023	12/31/2022	06/30/2023	12/31/2022
Current					
Cash and cash equivalents	6	4,642	1	4,790	64,723
Short-term investments	7	13,205	7,186	13,205	7,186
Accounts receivable	8	-	-	142	2,032
Inventory	9	-	-	8,609	8,570
Advance to suppliers - related parties	10	-	-	-	12,979
Advances to suppliers		-	11	14,060	515
Recoverable taxes		337	6	2,078	1,803
Prepaid expense		46	46	1,762	1,730
		18,230	7,250	44,646	99,538
Non-current					
Short-term investments	7	66,219	61,875	-	-
Recoverable taxes		-	-	2,969	2,850
Judicial deposits		166	166	891	770
Investments	11	922,505	1,015,825	-	-
Property, plant and equipment	12	2,379	2,482	728,852	746,533
Intangible assets	13	-	-	536,284	580,562
		991,269	1,080,348	1,268,996	1,330,715
Total assets		1,009,499	1,087,598	1,313,642	1,430,253

Liabilities and equity		Parent Company		Consolidated	
	Note	06/30/2023	12/31/2022	06/30/2023	12/31/2022
Current					
Loans and borrowings	15	9,380	9,346	46,448	44,152
Trade payables	16	560	562	36,220	39,670
Tax and labor obligations		160	9	7,096	7,502
Other accounts payable		77	190	1,555	1,577
Advances to clients	17	-	-	2,410	5,739
Related-party loans	10	76,927	44,363	609	-
		87,104	54,470	94,338	98,640
Non-Current					
Loans and borrowings	15	119,055	123,030	307,408	298,101
Tax and labor obligations		-	-	7,242	7,081
Deferred income tax and social contribution	25.c	-	-	42,539	48,493
Labor contingencies	18	-	-	167	-
Other accounts payable		1,839	1,879	2,959	3,449
Other accounts payable to related parties	10	-	-	55,058	63,502
		120,894	124,909	415,373	420,626
Equity					
Share capital	19.a	977,662	977,662	977,662	977,662
Advance for future capital increase	19.b	341,059	341,059	341,059	341,059
Capital reserves	19.c	108,175	108,175	108,175	108,175
Asset and liability valuation adjustments	19.d	151,288	193,613	151,288	193,613
Accumulated losses		(776,683)	(712,290)	(776,683)	(712,290)
Equity attributable to controlling shareholders		801,501	908,219	801,501	908,219
Non-controlling interest	11.d	-	-	2,430	2,768
		801,501	908,219	803,931	910,987
Total liabilities and equity		1,009,499	1,087,598	1,313,642	1,430,253

See the accompanying notes to the quarterly individual and consolidated financial information.

GRANBIO INVESTIMENTOS S.A.

Statements of profit or loss
Three-month period ended June 30, 2023 and 2022
(In R$ thousand)

	Note	Parent Company				Consolidated			
		04/01/2023 to 06/30/2023	01/01/2023 to 06/30/2023	04/01/2022 to 06/30/2022	01/01/2022 to 06/30/2022	04/01/2023 to 06/30/2023	01/01/2023 to 06/30/2023	04/01/2022 to 06/30/2022	01/01/2022 to 06/30/2022
Revenue from goods and services sold	20	-	-	-	-	1,486	3,044	6,843	13,957
Cost of goods sold and services rendered	21	-	-	-	-	(10,453)	(23,594)	(8,981)	(18,565)
Gross loss		-	-	-	-	(8,967)	(20,550)	(2,138)	(4,608)
Operating income and (expenses)									
Administrative and general expenses	22	(1,635)	(3,537)	(1,737)	(4,202)	(13,348)	(26,235)	(11,908)	(26,726)
Other operating income and (expenses)	23	-	-	1,094	1,094	(645)	(630)	(1,864)	(8,724)
Share of profit (loss) of equity-accounted investees	11.c	(29,845)	(61,267)	(37,554)	(68,647)	-	-	-	-
Net income before financial revenue (expenses)		(31,480)	(64,804)	(38,197)	(71,755)	(22,960)	(47,415)	(15,910)	(40,058)
Financial revenue	24	5,095	8,611	1,684	5,307	4,981	9,218	49	4,336
Financial expenses	24	(4,095)	(8,200)	(7,160)	(8,409)	(13,911)	(28,541)	(29,035)	(41,822)
Financial Result, net		1,000	411	(5,476)	(3,102)	(8,930)	(19,323)	(28,986)	(37,486)
Profit/loss before income tax and social contribution		(30,480)	(64,393)	(43,673)	(74,857)	(31,890)	(66,738)	(44,896)	(77,544)
Current income tax and social contribution	25	-	-	-	-	116	(362)	-	-
Deferred income tax and social contribution	25	-	-	-	-	1,156	2,369	1,148	2,370
Loss for the period		(30,480)	(64,393)	(43,673)	(74,857)	(30,618)	(64,731)	(43,748)	(75,174)
Controlling interest						(30,480)	(64,393)	(43,673)	(74,857)
Non-controlling interest						(138)	(338)	(75)	(317)
Loss for the period						(30,618)	(64,731)	(43,748)	(75,174)
Number of shares						108,133	108,133	108,133	108,133
Earnings (loss) per share						(0.2819)	(0.5955)	(0.4039)	(0.6923)

See the accompanying notes to the quarterly individual and consolidated financial information.

GRANBIO INVESTIMENTOS S.A.

Statements of other comprehensive income
Three-month and six-month periods ended June 30, 2023 and 2022
(In R$ thousand)

		Parent Company				Consolidated			
	Note	04/01/2023 to 06/30/2023	01/01/2023 to 06/30/2023	04/01/2022 to 06/30/2022	01/01/2022 to 06/30/2022	04/01/2023 to 06/30/2023	01/01/2023 to 06/30/2023	04/01/2022 to 06/30/2022	01/01/2022 to 06/30/2022
Loss for the period		(30,480)	(64,393)	(43,673)	(74,857)	(30,618)	(64,731)	(43,748)	(75,174)
Other comprehensive income to be reclassified to profit or loss in subsequent periods:									
Accumulated translation adjustment - CTA	11.c	(27,740)	(42,325)	53,134	(36,728)	(27,740)	(42,325)	53,134	(36,728)
Comprehensive income for the period		(58,220)	(106,718)	9,461	(111,585)	(58,358)	(107,056)	9,386	(111,902)
Profit attributable to:									
Controlling interest						(58,220)	(106,718)	9,461	(111,585)
Non-controlling interest						(138)	(338)	(75)	(317)
Total comprehensive income						(58,358)	(107,056)	9,386	(111,902)

The accompanying notes are an integral part of the individual and consolidated financial statements.

GRANBIO INVESTIMENTOS S.A.

Statements of changes in equity
Three-month and six-month periods ended June 30, 2023 and 2022
(In R$ thousand)

		Attributable to the controlling shareholders							
	Note	Share capital	Advance for future capital increase	Capital reserve	Asset and liability valuation adjustments	Accumulated losses	Equity attributable to shareholders	Noncontrolling interest	Total equity
Balances on January 01, 2022		977,662	-	108,175	232,597	(739,472)	578,962	3,530	582,492
Accumulated translation adjustment - CTA	11.c	-	-	-	(36,728)	-	(36,728)	-	(36,728)
Loss for the period		-	-	-	-	(74,857)	(74,857)	(317)	(75,174)
Balances on June 30, 2022		977,662	-	108,175	195,869	(814,329)	467,377	3,213	470,590
Balances on January 01, 2023		977,662	341,059	108,175	193,613	(712,290)	908,219	2,768	910,987
Accumulated translation adjustment - CTA	11.c	-	-	-	(42,325)	-	(42,325)	-	(42,325)
Loss for the period		-	-	-	-	(64,393)	(64,393)	(338)	(64,731)
Balances on June 30, 2023		977,662	341,059	108,175	151,288	(776,683)	801,501	2,430	803,931

See the accompanying notes to the quarterly individual and consolidated financial information.

Statement of cash flow
Three-month and six-month periods ended June 30, 2023 and 2022
(In R$ thousand)

	Note	Parent Company		Consolidated	
		06/30/2023	06/30/2022	06/30/2023	06/30/2022
Cash flow from operating activities					
Loss for the period		(64,393)	(74,857)	(64,731)	(75,174)
Adjustments for:					
Depreciation	12	103	83	20,050	16,373
Amortization	13	-	-	8,586	9,004
Property, plant and equipment write-off		-	-	55	365
Write-off of intangible assets		-	-	-	720
Earnings on short-term investments		(4,964)	(3,140)	(620)	-
Share of profit (loss) of equity-accounted investees	11.c	61,267	68,647	-	-
Provision for leasing interest		(35)	(33)	(35)	(33)
Provision for interest on loans and borrowings	15.b	7,082	8,150	22,626	37,718
Deferred income tax and social contribution		-	-	(2,386)	(2,370)
Provision (reversal) for impairment losses		-	-	652	10,474
Reversal from inventories losses		-	-	-	(30)
Result for adjustments in the period		(940)	(1,150)	(15,803)	(2,953)
Change in assets and liabilities:					
Accounts receivable		-	-	1,204	203
Advance to suppliers		11	52	(13,545)	1,439
Advance to suppliers - related parties		-	-	12,979	-
Inventories		-	-	(39)	136
Recoverable taxes		(230)	130	(293)	237
Prepaid expenses		-	91	(126)	85
Labor contingencies		-	-	167	-
Judicial deposits		-	11	(121)	16
Other accounts receivable from related parties		-	-	(11,723)	(9,872)
Trade payables		(2)	(1,519)	(3,005)	(12,216)
Tax and labor obligations		151	(16)	36	6,868
Advances to clients		-	-	(3,065)	(3,365)
Other accounts payable		(118)	17	(661)	(120)
Net cash used in operating activities		(188)	(1,234)	(18,192)	(16,589)
Interest on amortized loans and borrowings	15.b	(8,114)	(8,064)	(8,114)	(12,297)
Net cash used in operating activities		(9,242)	(10,448)	(42,109)	(31,839)
Cash flows from investing activities					
Discharge (placement) of short-term investments		(5,500)	-	(5,500)	-
Loans awarded to related parties		-	(11,822)	-	-
Increase in investments	11.c	(10,272)	(8,068)	-	-
Acquisition of property, plant and equipment		-	(7)	(2,843)	(7)
Acquisition of intangible assets		-	-	(7,223)	(577)
Net cash produced by (used in) investment activities		(15,772)	(19,897)	(15,566)	(584)
Cash flows from financing activities					
Loans from related parties		32,564	43,706	609	46,322
Payment of loans and borrowings - principal	15.b	(2,909)	(13,358)	(2,909)	(13,358)
Net cash from financing activities		29,655	30,348	(2,300)	32,964
Effect of exchange variation on cash and cash equivalents		-	-	42	(655)
Increase (decrease) in cash and cash equivalents		4,641	3	(59,933)	(114)
Cash and cash equivalents on January 01		1	-	64,723	274
Cash and equivalents on June 30		4,642	3	4,790	160
Increase (decrease) in cash and cash equivalents		4,641	3	(59,933)	(114)

See the accompanying notes to the quarterly individual and consolidated financial information.

GRANBIO INVESTIMENTOS S.A.

Statements of added value
Three-month and six-month periods ended June 30, 2023 and 2022
(In R$ thousand)

	Parent Company		Consolidated	
	06/30/2023	06/30/2022	06/30/2023	06/30/2022
Revenue				
Sales of merchandise, goods and services	-	-	3,044	14,908
Other revenue and (costs)	-	1,094	22	(8,724)
Impairment loss on trade receivables	-	-	(652)	
	-	1,094	2,414	6,184
Inputs acquired from third parties				
Costs	-	-	(23,529)	(18,423)
Material, electricity, outsourced services and other operating expenses	(3,137)	(4,036)	(10,900)	(10,755)
	(3,137)	(4,036)	(34,429)	(29,178)
Gross value added	(3,137)	(2,942)	(32,015)	(22,994)
Depreciation and amortization	(102)	(84)	(9,256)	(9,989)
	(102)	(84)	(9,256)	(9,989)
Net value added	(3,239)	(3,026)	(41,271)	(32,983)
Transferred added value				
Share of profit (loss) of equity-accounted investees	(61,267)	(68,645)	-	-
Finance revenue	8,611	5,307	9,218	4,336
	(52,656)	(63,338)	9,218	4,336
Added value to be distributed	(55,895)	(66,364)	(32,053)	(28,647)
Distribution of added value				
Personnel				
Direct compensation	-	1	1,568	1,625
Benefits	76	58	636	935
Government Severance Indemnity Fund for Employees (FGTS)	-	1	141	193
	76	60	2,345	2,753
Taxes and contributions				
Federal	262	55	1,155	1,528
State	-	-	677	456
	262	55	1,832	1,984
Interest on third-party capital				
Interest on loans and borrowings	8,160	8,378	28,501	41,790
	8,160	8,378	28,501	41,790
Return on equity capital				
Profit (loss) retained	(64,393)	(74,857)	(64,393)	(74,857)
Non-controlling interest	-	-	(338)	(317)
	(64,393)	(74,857)	(64,731)	(75,174)
Total	(55,895)	(66,364)	(32,053)	(28,647)

See the accompanying notes to the quarterly individual and consolidated financial information.

1. Reporting entity

GranBio Investimentos S.A. ("GranBio" or "Company") is a privately held company having its registered office at Av. Professor Almeida Prado, 532 – Edif. Prédio, 50, Butantã, in the city and state of São Paulo. It was founded on June 13, 2011. Its ultimate and direct parent company is GranInvestimentos S.A., which has its registered office at Av. Faria Lima, 3144 – 3º andar, Jardim Paulistano, in the city and state of São Paulo.

GranBio is a holding company and its subsidiaries are mainly engaged in: (a) logistical and technological solutions for supplying biomass (b) creating viable flexible biorefineries that can be rolled out on an industrial scale to convert biomass into cellulose sugar, biofuels, biochemicals, nanocellulose and other ligno-cellulosic materials, in addition to electricity; (c) developing and licensing patents and intellectual property in the renewables sector using biomass as a raw material; and (d) generating and cogenerating renewable electric power.

Through its subsidiaries in the United States of America (USA), the Company develops and licenses clean technology to produce nanocellulose and biochemicals. GranBio LLC has upwards of 350 patents, including registered patents and applications, for various proprietary technologies it has developed. The Thomaston Research Center in Georgia, USA, has four integrated pilot plants that have been continuously operating for 12 years.

GranBio entered a global alliance with Nuseed through 2034 for the technical development of sugarcane varietals as a source of biomass for second-generation biochemicals and fuels (2G). The alliance with Nuseed guarantees GranBio an exclusive cane-energy licensing contract in 2G biorefineries worldwide.

The Company's quarterly information embraces the Company and its subsidiaries (jointly referred to as 'Group').

Continued operation

On June 30, 2023 the Company presented a consolidated net working capital deficiency of R$ 49,692 and accumulated losses of R$ 776,683.

Due to the business characteristics of a technology firm, Management is continuously evaluating the ability of the Company and its subsidiaries to keep generating sufficient cash flow to ensure the continuity of its operations for the foreseeable future, by either generating operating cash flows, disposing of assets, external funding, or shareholder funding.

As regards the subsidiary BioFlex Agroindustrial S.A., the Group monitors projected short-term cash flow, which reflects the expected use of the recently implemented asset and the investments being made to achieve commercial capacity in an ongoing operation. Additionally, in January 2023 we engaged consultancy services from a specialized engineering company to develop a project to increase production capacity from 30 million liters per year to 60 million liters per year.

The Company's Business Plan is based on the following actions already carried out impacting estimated future cash flows:

- By way of its shareholders, on March 09, 2022 the parent company GranInvestimentos S.A. fully settled the working capital loan, which stood at R$ 12,637 as of December 31, 2021, reducing the Company's overall indebtedness and increasing the balance of the loan payable to the Parent company;
- On September 08, 2022 the direct subsidiary BioEdge Agroindustrial Ltda. and Atlântica Sementes S.A, of Nuseed Group, entered into a long-term strategic alliance to accelerate investments in Research and Development (R&D) and sales in global sugarcane markets. Atlântica Sementes S.A acquired the commercial and sugarcane processing assets from the indirect subsidiary BioVertis Produção Agrícola Ltda. and the R&D program in order to improve the value of the energy produced by innovating in bioenergy cane. GranBio will continue investing in cane energy by way of Nuseed Group and will be the exclusive license holder of cane energy as a raw material for 2G applications in the ligno-cellulosic field, such as cellulose sugar and lignin, 2G ethanol, biochemicals, Sustainable Aviation Fuels (SAF) and renewable materials worldwide. The agreement will allow the value chain for biomass fuel to become a powerful solution to guarantee a secure supply of renewable raw material on a large-scale without competing with food products;
- On November 10, 2022 and December 05, 2022 the indirect subsidiary BioFlex Agroindustrial S.A. entered into a re-profiling agreement with Banco do Brasil S.A. and Bradesco S.A., respectively, which involved the granting of a partial reduction of the balance payable on the financing lines and guarantee commission contracted with the two institutions, as well as the granting of a grace period for principal and interest. The total exposure as of June 30, 2023 is R$ 110,567 and R$ 77,786 respectively;
- On December 30, 2022 the indirect subsidiary BioFlex Agroindustrial S.A. and the then investee Companhia Energética de São Miguel dos Campos (CESM) entered into an operation that involved the assumption by CESM of the entirety of the existing debt contracted by BioFlex Agroindustrial S.A. with the National Bank for Economic and Social Development - BNDES. This debt assumption will provide the Company and its subsidiaries with substantial debt relief, maintaining the long-term contract with CESM for the supply of energy and steam for the operations of the Company and its subsidiaries. On February 24, 2023, 50% of the CESM shares held by BioFlex were transferred to Usina Caeté S.A. without a gain or loss in the operation, as detailed in Note 5.a.
- Through its subsidiary AVAPCO, on January 26, 2023 GranBio obtained a new grant line of up to USD 80 million from the U.S. Department of Energy (DOE) for the construction of an integrated 2G SAF (Sustainable Aviation Fuel) biorefinery on a demonstrative scale, equivalent to 6 million liters per year, and a joint industrial-scale nanocellulose plant using wood and sugarcane trash as raw materials.

The planned actions that impact the future cash flow estimates are:

- Negotiating an agreement with Itaú aiming at lengthening the debt with amortization allocated 100% in the long-term without the need for and initial cash disbursement from current operations. The total exposure as of June 30, 2023 is R$ 37,068;
- The Company is implementing its capital restructuring plan through: (i) profiling the current debt with Banco Itaú; (ii) identifying a strategic partner for joint action in the development of its business plan for technology marketing and licensing, selling second generation ethanol and biochemicals, and an investing partner for the advanced jet fuel production plant (Sustainable Aviation Fuel – SAF); and (iii) negotiating cellulosic ethanol presale contracts as cash advances strategy to optimize its working capital equation and accelerate investments to raise BioFlex I's capacity.

As regards to the operations of the indirect subsidiary BioFlex Agroindustrial S.A., due to price fluctuations in the energy market verified in the 2022/2023 crop year, the Company's management opted to allocate straw biomass and bagasse inventories for the production and sale of energy on the spot market of the former joint venture Companhia Energética de São Miguel dos Campos (CESM). This was a specific short-term strategy and will not be adopted in the new 2023/2024 crop year, in which the unit will resume focus on producing 2G ethanol for the foreign market, taking advantage of the current favorable biofuel prices.

Considering the business plan, Management believes that obligations will be paid as planned, and that the cash flow generation will be appropriate to meet its obligations in the foreseeable future.

However, if the business plan is not successful, the Company's current controlling shareholders have formally committed to continue supporting the Company in all actions required for continuity, including the commitment to allocate additional resources in sufficient amount.

Based on its evaluation, Management has concluded that there is no significant uncertainty as to the Company's ability to continue in operation for the foreseeable future. Therefore, the Company and its subsidiaries' quarterly information was prepared under the assumption of continuity.

2. List of Subsidiaries

Direct subsidiaries

- BioEdge Agroindustrial Ltda.: Company that invests, on a commercial scale, in second-generation ethanol and biochemical plants;
- GranBio LLC: A US-based company engaged in investing in companies strategically related to the Company's business plan, by creating technologies for converting biomass into cellulose sugar for biochemicals and second-generation ethanol, in addition to developing nanocellulose for a range of industries.

Indirect subsidiaries

- BioFlex Agroindustrial S.A.: Company engaged in the production of biomass, processing biomass for the production and sale of biofuel, electricity, biochemicals and pharmachemicals, technological research and development, sale of sugarcane straw, bagasse and biomass;
- GranBio Intellectual Property Holdings LLC: Owner of all the patents and industrial and technological secrets developed by GranAPI LLC and its subsidiaries;
- GranBio Conversion Technologies LLC: Company that owns the Thomaston asset, a demonstration plant for existing biomass conversion technologies. This company has a leasing agreement of its assets with AVAPCO LLC;
- American Green + LLC: Company that holds the sublicensing rights of technologies owned by GranBio Intellectual Property Holdings LLC for converting biomass into cellulosic ethanol;
- AVAPCO LLC: Company that holds the sublicensing rights of technologies owned by GranBio Intellectual Property Holdings LLC for converting biomass into cellulosic ethanol and nanocellulose. This company leases the Thomaston asset (a demonstration plant) from GranBio Process Conversion Technologies LLC to develop new technologies and provide services to clients;
- GranBio Services Inc.: A US-based company that invests in companies strategically related to the Company's business plan. It is the holding company of the three companies below:

- ✓ Alpena Biorefinery Inc.: Company providing water treatment services to the paper and pulp company Decorative Panels International, located in Alpena, MI, and the production and sale of molasses to other clients;
- ✓ Alpena Protoype Bioref LLC: Nonoperating company owner of the Alpena Biorefinery land;
- ✓ Alternative Bioprod Inv. LLC: Nonoperating company.

Joint ventures

- Companhia Energética de São Miguel dos Campos: Company dedicated to developing an integrated electricity and steam generation system running on biomass - cogeneration, electricity and steam supply and provision of services related to energy efficiency enhancement and generation. Energy generation is substantially to meet the demand of its shareholders and the excess of its generation is included in electrical grid system;

- On February 24, 2023, 50% of the CESM shares held by BioFlex were transferred to Usina Caeté S.A. without no gain or loss on the transaction, as detailed in Note 5.a.

Note 5 shows the percentage of interest in the direct and indirect subsidiaries and joint ventures.

3. Basis of preparation and presentation of the individual and consolidated quarterly statements

The Executive Board approved the preparation of the individual and consolidated quarterly financial statements on August 10, 2023.

The preparation of the individual and consolidated quarterly financial statements for the period ended June 30, 2023 includes the individual and consolidated quarterly financial information.

The Company's individual and consolidated quarterly information on June 30, 2023 comprise the individual and consolidated quarterly information of the Company and its subsidiaries. In the individual quarterly reports, the corresponding interest in the subsidiaries is presented using the equity method.

Statement of compliance

The Company's individual quarterly statements have been prepared and are being presented in accordance with the standard NBC TG 21 (R4) and the consolidated interim financial statements in accordance with NBC TG 21 (R4) and the international standard IAS 34 - “Interim Financial Reporting”, issued by the “International Accounting Standards Board - (IASB)” and the standards issued by the Brazilian Securities Commission, applicable to the individual and consolidated quarterly statements. NBC TG 21 (R4) / IAS 34 requires the use of certain accounting estimates by Company Management. The quarterly financial statements have been prepared on the historical cost basis, except for certain financial assets and liabilities, which are measured at fair value. These Quarterly Statements do not include all the information and disclosures required in annual financial statements and should therefore be read in conjunction with the financial statements for the financial year ended December 31, 2022, which were prepared in accordance with IFRS and the accounting practices adopted in Brazil. There were no changes to the accounting practices adopted in the period ended June 30, 2023 in relation to those applicable at December 31, 2022.

Details on the Group's main accounting policies are presented in Note 5.

Functional and presentation currency

The individual and consolidated quarterly statements are being presented in Brazilian Reais, which is the Company and its subsidiaries' functional currency, except the subsidiary GranBio LLC and its direct and indirect subsidiaries, whose functional currency is the US Dollar. All balances have been rounded to the nearest thousand, unless otherwise indicated.

Use of estimates and judgments

In preparing the individual and consolidated quarterly statements, Management has made judgments and used estimates that affect the application of the accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to estimates are recognized prospectively.

a. Judgments

The information on judgments made in applying the accounting policies that have significant effects on the amounts recognized in the individual and consolidated quarterly statements are included in the following notes:

- Note 1 – Reporting Entity (Operation continuity): Management's evaluation of how the Group will produce and/or obtain capital to support operations over the next 12 months.
- Note 5 – Significant accounting policies (a. Consolidation basis): determination whether the Company actually has control over an investee.
- Note 10 – Related-party transactions: the shareholder GranInvestimentos S.A. repurchased the debentures issued by BioFlex Agroindustrial S.A for R$ 1,00, with each share of the debenture payable by BioFlex being restated at its market value.
- Note 11 - Investments: determines whether the Company has influence over an investee;
- Note 12 – Property, plant and equipment and Note 13 – Intangible assets: impairment test, key assumptions underlying the recoverable amounts. For further information see Note 14;
- Note 15 – Loans and borrowings: Compliance with the contractual terms of loans and borrowings;
- Note 20 – Net revenue from goods and services sold: the Group recognizes revenue when it transfers the control of a product or service to the client.

b. Uncertainties about assumptions and estimates

Information about assumptions and estimation uncertainties as of June 30, 2023 that have a significant risk of resulting in a material adjustment to the carrying amounts of assets and liabilities within the coming financial year are included in the following notes:

- Note 9 – Inventories: recoverable value of inventory based on market replacement cost, slow-moving products, expired products or products nearing the expiration date and products that do not meet quality standards, recorded as "Cost of products sold" and replacement cost in the market;

- Note 12 – Property, plant and equipment: Assessing the need to conduct impairment tests on property, plant and equipment and key assumptions underlying recoverable amounts. For further information see Note 14;
- Note 13 – Intangible assets: main assumptions underlying the recoverable amounts, including the recoverability of development costs, licenses, intellectual property and goodwill deriving from the business combination; for further information see Note 14.

Measurement of fair value

A number of the Company's accounting policies and disclosures require the measurement of fair values, for both financial and non-financial assets and liabilities; disclosures are shown in Note 26.

When measuring the fair value of an asset or a liability, the Group used observable market data as far as possible. Fair values are categorized into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows.

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2: inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices);
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs);
- Further information about the assumptions adopted in measuring fair values is included in Note 14.

4. Basis of measurement

The individual and consolidated financial statements have been prepared on the historical cost basis, except for the valuation of certain assets and liabilities, such as financial instruments, which are measured at fair value.

5. Significant accounting policies

The accounting policies set out below have been applied consistently to all periods presented in these individual and consolidated quarterly statements.

(In Thousand Reais)

a. Basis of consolidation

Percentage interest in investees

See below the percentage interest in the direct and indirect subsidiaries and joint ventures as of June 30, 2023 and December 31, 2022.

	Country	Percentage interest	
Direct subsidiaries		06/30/2023	12/31/2022
GranBio LLC	USA	100.00%	100.00%
BioEdge Agroindustrial Ltda.	Brazil	100.00%	100.00%
Indirect subsidiaries			
Bioflex Agroindustrial S.A.	Brazil	100.00%	100.00%
GranBio - Intellectual Property Holdings LLC	USA	97.00%	97.00%
GranBio Conversion Technologies LLC	USA	100.00%	100.00%
American Green + LLC	USA	100.00%	100.00%
AVAPCO LLC	USA	100.00%	100.00%
GranBio Services Inc.	USA	96.10%	96.10%
Alpena Biorefinery INC	USA	100.00%	100.00%
Alpena Protoype Bioref LLC	USA	100.00%	100.00%
Alternative Bioprod Inv. LLC	USA	100.00%	100.00%
Joint ventures			
Companhia Energética de São Miguel dos Campos – CESM (a)	Brazil	-	50.00%

(a) In FY 2022 the indirect subsidiary BioFlex entered into various negotiations with the then Joint Venture, Companhia Energética de São Miguel dos Campos (CESM): (i) On September 30, 2022 the Company's management authorized the sale of property, plant and equipment related to the thermoelectric plant; (ii) on December 30, 2022 the amount that the indirect subsidiary BioFlex had receivable from Companhia Energética São Miguel dos Campos (CESM) was fully amortized due to the agreement between the companies by which CESM assumed the entire existing debt contracted by the indirect subsidiary BioFlex from the National Bank for Economic and Social Development– BNDES; (iii) On February 24, 2023, 50% of the CESM shares held by BioFlex were transferred to Usina Caeté S.A. without a gain or loss in the operation, to cover the pass-through of the debt to BNDES.

(i) Subsidiaries

The Group controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The quarterly statements of subsidiaries are included in the consolidated quarterly statements from the date on which control commences until the date on which control ceases.

The subsidiaries' quarterly information is recognized in the parent company's quarterly financial statements by the equity-income method.

(ii) Investments in equity-accounted investees

The Group's investments in entities valued by the equity method consists of interest in subsidiaries, in the individual financial statements.

(iii) Transactions eliminated on consolidation

Intra-group balances and transactions and any unrealized income and expenses arising from intra-group transactions are eliminated in preparing the consolidated quarterly statements. Unrealized gains arising from transactions with investees recorded by the equity income method are eliminated against the investment in proportion to the Group's interest in the investee. Unrealized losses are eliminated in the same way as unrealized gains, but only to the extent that there is no evidence of an impairment loss.

(iv) Loss of control

When the Group loses control over a subsidiary, it derecognizes the assets and liabilities of the subsidiary, and any related NCI and other components of equity. Any gain or loss arising from the loss of control is recognized in profit or loss.

(v) Non-controlling interest

NCI are measured initially at their proportionate share of the acquiree's identifiable net assets at the date of acquisition. Changes in the Group's interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions.

b. Foreign currency

(i) Foreign-currency transactions

Foreign-currency transactions are translated to the respective functional currencies of Company's entities at exchange rates on the dates of the transactions.

Cash assets and liabilities denominated in foreign currencies are translated into the functional currency at the exchange rate on the reporting date. Non-cash assets and liabilities that are measured at fair value in a foreign currency are translated to the functional currency at the exchange rate when the fair value was determined. Non-monetary items that are measured based on historical cost in a foreign currency are translated at the exchange rates on the date of the transaction. Foreign currency differences are generally recognized in profit or loss.

The investees' statements of profit or loss and cash flow, not in the parent company's functional currency, are translated to Brazilian Real at the average monthly exchange rate; assets and liabilities are translated at the closing rate and other equity items are translated at the historic rate.

Exchange variation on investments in subsidiaries and associated companies, with a functional currency different from the Parent Company, are recorded in equity as an accumulated translation adjustment, and are transferred to profit or loss when investments are sold.

(ii) Overseas subsidiaries

The assets and liabilities of overseas subsidiaries, including goodwill and fair value adjustment from acquisition, are translated into Brazilian Real at the exchange rate on the reporting date. The income and expenses of overseas subsidiaries are translated into Brazilian Real at the exchange rate on the dates of the transactions.

Foreign currency differences generated on translation into the presentation currency are recognized in other comprehensive income and accumulated in the asset and liability valuation adjustment in equity. If the subsidiary is not a wholly owned subsidiary, the corresponding proportion of the translation difference is attributed to non-controlling interest.

c. Revenue

Revenue is measured based on the consideration specified in a contract with the client. The Group recognizes revenue when it transfers control over a good or service to a client or when the sale/concession of the license takes place.

The following topics provide information about the nature and timing of the satisfaction of performance obligations in contracts with clients, including significant payment terms, and the related revenue recognition policies:

- Service fee income: revenue is recognized over time as services are provided. The stage of completion to determine the amount of revenue to recognized is assessed based on surveys of work performed. If the services under a single arrangement are rendered in different reporting periods, then the consideration is allocated based on their relative stand-alone selling prices. The stand-alone selling price is determined based on the list prices at which the Group sells the services in separate transactions. Invoices are issued monthly and are usually payable within 30 days;
- Resale of goods and sugarcane and energy cane (Vertix): revenue is recognized when the goods are delivered and have been accepted by clients at their premises. Clients obtain control of products when the goods are delivered to and have been accepted at their premises. This sales revenue is recognized when the performance obligation is fulfilled, i.e., when the promised product is physically transferred, and the client obtains control over this product;
- License revenue: the Company's license revenue is recognized at the specific time of sale or concession, since, at that time, the client can determine how and when to use this license without needing the Company’s performance, that is, the Company will no longer carry out any activities that significantly affect the intellectual property under that license to which the client has rights. Therefore, the license provides the right to use the Company's intellectual property as it exists at the time it is sold and granted and, for this reason, revenue is recognized at that specific time of the sale and concession of the license, as its intellectual property does not change, and the client obtains control at the time the license is granted;
- Revenue from collaboration agreements: revenue is deferred and recognized over time, on a straight-line basis, according to the time determined in the agreement between the parties. Revenue from collaboration agreements also includes revenue recognition from the development of new products. The price and billing methods are determined in specific negotiations with each client.

d. Employee benefits

Short-term employee benefits

Short-term employee benefits obligations are recognized as personnel expenses as the corresponding service is provided. The liability is recognized for the expected payable amount if the Group has a present legal or constructive obligation to pay this amount as a result of service provided by the employee, and the obligation can be reliably estimated.

e. Finance income and costs

The Company's finance income and costs include:

- Interest income and expenses;
- The net gain/loss on financial assets at fair value through profit/loss;
- The foreign-currency gain/loss on financial assets and liabilities.

Interest income or expense is recognized using the effective interest method.

'Effective interest rate' is the rate that exactly discounts the estimated future cash payments or receipts through the expected life of the financial instrument by:

- Gross carrying amount of the financial asset; or
- At amortized cost of the financial liability.

When calculating the interest income or expense, the effective interest rate is charged on the gross carrying amount of the asset (when the asset is not impaired) or at the amortized cost of the liability. However, interest revenue is calculated by applying the effective interest rate to the amortized cost of the financial asset suffering impairment after initial recognition. If the asset is no longer impaired, the interest revenue is once again calculated on the gross amount.

f. Inventories

Inventories are valued at the lowest average purchase or production cost and net realizable value. The Group considers the following when determining the provision for inventory losses: low turnover products, expired or expiring products and products that do not meet quality standards at market replacement cost, recorded as “Cost of products sold”. As described in Note 9, inventories are classified into raw materials and inputs necessary for the production of 2G ethanol.

g. Property, plant and equipment

(i) Recognition and measurement

Items of property, plant and equipment are measured at historical cost of acquisition or construction, which includes the capitalized borrowing costs, less accumulated depreciation and any impairment losses, when applicable.

If parts of an item of property, plant and equipment have different useful lives, they are recorded as individual items (major components) of property, plant and equipment. Gains and losses on the sale of an item of property, plant and equipment (calculated by the difference between the proceeds from the sale and the book value of the property, plant and equipment) is recognized in other operating income/loss.

(ii) Subsequent expenditure

Subsequent expenses are capitalized to the extent that it is probable that future benefits associated with the expenditures will accrue to the Group. Recurring maintenance and repair expenses are recorded in profit/loss.

(In Thousand Reais)

(iii) Depreciation

Depreciation is calculated to amortize the cost of property, plant and equipment items, net of their estimated residual values, using the straight-line method on the estimated useful lives of the items and the depreciation is recognized in profit/loss. Depreciation is recognized in profit or loss. The right-of-use asset is subsequently amortized using the straight-line method from the inception date to the end of the lease term, unless the lease transfers ownership of the underlying asset to the Group at the end of the lease term or the cost of the lease right-of-use asset reflects that the Group will exercise a call option. In that case the right-of-use asset will be amortized over its lifetime. Land is not depreciated.

Property, plant and equipment items are depreciated from the date they are installed and available for use, or in the case of internally built assets, from the day construction is completed and the asset is available for use.
The estimated useful lives are (in years):

Property, plant and equipment	06/30/2023	12/31/2022
IT equipment	2 – 10	3 – 5
Vehicles	5	5
Furniture and fixtures	10 – 15	3 – 10
Lab plant and equipment	10 - 25	2 – 10
Agricultural plant and equipment	10 - 30	4 – 12
Improvements to rented property	30	25
Machinery, equipment and industrial facilities	5 - 60	2 – 40
Lease rights-of-use	10	10
Buildings and constructions	30 - 60	2 – 60

Depreciation methods, useful lives and residual values are reviewed annually and adjusted if appropriate.

The Company hired a company specialized in evaluating the useful lives of the main assets of the indirect subsidiary BioFlex, and the new useful lives began to be considered in January 2023.

h. Intangible assets and goodwill

(i) Goodwill

The goodwill resulting from the acquisition of subsidiaries is measured at cost, less impairment test losses.

(ii) Research and development

Expenditure on research activities is recognized in profit or loss as incurred.
Development expenditures are capitalized only if development costs can be reliably measured, if the product or process is technically and commercially viable, if future economic benefits are probable, and if the Group has the intention and sufficient resources to complete development and use or sell the asset. After initial recognition, capitalized development expenditures are measured at cost, less accumulated amortization and any impairment losses.

(iii) Other intangible assets

Other intangible assets that are acquired by the Group that have finite useful lives are measured at cost, less accumulated amortization and accumulated impairment losses. Subsequent expenditures are capitalized only when they increase the future economic benefits embodied in the specific asset to which they relate. Amortization is calculated on the cost of an asset, or other equivalent cost, less the residual value.

(iv) Subsequent expenses

Subsequent expenses are only capitalized when they increase the future economic benefits embodied in the specific asset to which they relate. All other expenses are recognized in the statement of profit or loss when incurred.

(v) Amortization

Amortization is recognized in profit of loss using the straight-line method based on the estimated useful lives of intangible assets, from the date they are available for use.

The estimated useful lives are as follows (in years):

Intangible assets	06/30/2023	12/31/2022
Software	5	5
Technology licenses and intellectual property	30	30
Development - Energy Cane	12	-

(i) Licenses, technological intellectual property and goodwill arising from the business combination

Intangible assets are recorded at acquisition cost or at the fair value of intangible assets acquired in a business combination, less accumulated amortization calculated using the straight-line method, when applicable. These intangible assets are tested for impairment according to the accounting policy in Note 5 (k.ii). Goodwill is not amortized.

i. Financial instruments

(i) Recognition and initial measurement

Trade receivables and issued debt securities are initially recognized on the date they were originated.

All other financial assets and liabilities are initially recognized when the Group becomes a party to the contractual provisions of the instrument.

A financial asset (unless it is a trade receivable without a significant financing component) or financial liability is initially measured at fair value. A trade receivable without a significant financing component is initially measured at transaction price.

(ii) Classification and subsequent measurement

On initial recognition, a financial asset is classified as measured: at amortized cost or fair value through profit or loss - FVTPL.

Financial assets are not reclassified subsequent to initial recognition, unless the Group changes its business model for managing financial assets, in which case all affected financial assets are reclassified on the first day of the reporting period subsequent to the change in business model.

A financial asset is measured at amortized cost if it meets both of the following conditions below and it is not designated as being measured at FVTPL:

- It is held within a business model whose objective is to hold financial assets to receive contractual cash flows; and
- Its contractual terms generate, on specific dates, cash flows that are related only to the payments of principal and interest on the outstanding principal amount.

A debt instrument is measured at FVTPL.

Financial assets held for trading or managed with performance evaluated based on fair value are measured at FVTPL.

Financial assets

These assets are subsequently measured at amortized cost using the effective interest method. The amortized cost is reduced by impairment losses. Interest revenue, exchange gains and losses and impairment are recognized in profit or loss. Any gain or loss on derecognition is recognized in profit or loss.

Financial liabilities

Financial liabilities were classified as measured at amortized cost or at FVTPL. A financial liability is classified at FVTPL if it is classified as held for trading, is a derivative or is designated as such upon initial recognition. Financial liabilities measured at FVTPL are measured at fair value and net income (loss), including interest, is recognized in profit or loss. Other financial liabilities are subsequently measured at amortized cost using the effective interest rate method. Interest expenses, exchange gains and losses are recognized in profit or loss. Any gain or loss on derecognition is also recognized in profit or loss.

(iii) Derecognition

Financial assets

The Group derecognizes a financial asset when the contractual rights to the cash flows from the asset expire, or when the Group transfers the contractual rights to receive the contractual cash flows on a financial asset in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred or in which the Group neither transfers nor retains substantially all the risks and rewards of ownership of the financial asset and also does not retain control over the financial asset.

Financial liabilities

The Group derecognizes a financial liability when its contractual obligation is discharged, canceled, or expires. The Group also derecognizes a financial liability when the terms are modified and the cash flows of the modified liability are substantially different, in which case a new financial liability based on the modified terms is recognized at fair value.

Upon derecognition of a financial liability, the difference between the former carrying amount and the consideration paid (including assets transferred that do not carry cash or liabilities assumed) is recognized in profit or loss.

(iv) Offsetting

Financial assets and financial liabilities are offset and the net amount presented in the statement of financial position when, and only when, the Group currently has a legally enforceable right to offset the amounts and intends to settle them on a net basis or to realize the asset and settle the liability simultaneously.

j. Share capital

Common shares are classified as equity.

Additional costs directly attributable to the issuance of common shares and share options are recognized as a deduction from equity. Tax effects relating to transaction costs of these transactions are accounted for in accordance with CPC 32. /IAS 12.

k. Impairment

(i) Non-derivative financial assets

Financial instruments and contractual assets

The Group recognizes provisions for expected credit losses on:

- Financial assets measured at amortized cost; and
- Contract assets.

The Group measures the loss allowance at an amount equal to the ECL. Provisions for losses on trade receivables and contract assets are measured at an amount equal to the expected credit loss for the entire life of the instrument.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating the ECL, the Group considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes quantitative and qualitative information and analyses based on the Company’s historical experience, credit assessment and forward-looking information.

The Group assumes that the credit risk of a financial asset has increased substantially if it is more than 30 days overdue.

The Group considers a financial asset to be in default when:

- It is highly unlikely that the debtor will pay all its credit obligations without resorting to actions such as enforcing the guarantee (if applicable); or
- The financial asset is more than 90 days overdue.

The Group considers that a debt security has a low credit risk when its credit risk rating is equivalent to the globally accepted definition of “investment grade”.

- Lifetime ECLs are ECLs that result from all possible default events over the expected life of a financial instrument;

- 12-month ECLs are ECLs that result from possible default events within the 12 months after the reporting date (or a shorter period if the expected life of the instrument is less than 12 months).

The maximum period considered to estimate the expected credit loss is the maximum contractual period during which the Group is subject to credit risks.

Measuring expected credit losses

Expected credit losses are estimates weighted by the probability of credit loss. Credit losses are measured at present value based on all cash shortfalls (i.e. the difference between the cash flows due to the Group under the contract and the cash flows expected to be receive). Expected credit losses are discounted at the financial asset's effective interest rate, when applicable.

Impaired financial assets

At each reporting date, the Group evaluates whether the financial assets recorded at amortized cost are impaired. A financial asset is 'impaired' when one or more events occur that have a detrimental impact on the estimated future cash flows of the financial asset. Objective evidence that a financial asset is impaired includes the following observable data:

- Significant financial difficulty of the issuer or borrower; violation of contractual clauses, such as default or being more than 90 days overdue;
- Restructuring of an amount due to the Group under conditions that will not be accepted under normal circumstances;
- The probability that the borrower will file for bankruptcy or undergo another type of financial reorganization;
- The disappearance of an active market for that financial asset because of financial difficulties.

Presenting the provision for expected credit losses in the statement of financial position

The provision for financial asset losses measured at amortized cost is deducted from the gross carrying amount of the assets, when applicable.

Write-off

The gross carrying amount of a financial asset is written-off when the Group does not have a reasonable expectation to recovering the financial asset in whole or in part. The Group does not expect any significant recovery of the written-off amount. However, written-off financial assets may still be subject to credit enforcement for compliance with the Company's procedures for recovering amounts due.

(ii) Non-financial assets

At each reporting date the Group reviews the carrying amounts of its non-financial assets (except biological assets and inventory) for signs of impairment. If there is such an indication, the asset's recoverable amount is estimated. Goodwill is tested annually for impairment.

(In Thousand Reais)

For impairment testing, assets are grouped into the smallest group of assets that generate cash inflows from continuing use that are largely independent of cash inflows from other assets or CGUs (cash generating units). Goodwill resulting from a business combination is allocated to the CGUs or groups of CGUs that are expected to benefit from the synergies of the combination.

The recoverable amount of an asset or CGUs is the higher of its value in use and its fair value less selling expenses. Value in use is based on estimated future cash flows, discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and risks specific to the asset or CGU.

An impairment loss is recognized if the carrying amount of an asset or CGU exceeds its recoverable amount.

Impairment losses are recognized in profit or loss. They are allocated first to reduce the carrying amount of any goodwill allocated to the CGU (or group of CGUs) and then to reduce the carrying amount of the other assets in the CGU (or group of CGUs) on a pro rata basis.

An impairment loss with respect to goodwill is not reversed. For other assets, an impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

l. Provisions

Provision are recognized when the Group has a present obligation (legal or constructive) as a result of past events, it is probable that an outflow of resources will be required to settle the obligation and a reliable estimate of the amount of the obligation can be made. When the Group expects the amount of a provision to be reimbursed, in whole or in part, for example under an insurance contract, the reimbursement is recognized as a separate asset, but only when the reimbursement is virtually certain. The expense relating to any provision is presented in the statement of profit or loss, net of any reimbursement. The increase in the obligation due to the passage of time is recognized as a financial expense.

m. Statement of value added

The Group prepared the statements of value added pursuant to technical pronouncement CPC 09 - Statement of value added, which are presented as an integral part of the quarterly information in accordance with the BR GAAP applicable to publicly-held companies, while for IFRS they represent supplementary financial information.

6. Cash and cash equivalents

	Parent Company		Consolidated	
	06/30/2023	12/31/2022	06/30/2023	12/31/2022
Cash and banks - checking account	1	1	149	107
Short-term investments	4,641	-	4,641	64,616
Total	4,642	1	4,790	64,723

Cash and cash equivalents include cash, bank deposits used for payments and receipts for the Company's operations, in addition to short-term investments.

(In Thousand Reais)

Short-term investments classified as current, have a maximum grace period of three months from investment to redemption, and are used to manage immediate obligations. The yield on short-term investments is fixed income with an average of 102% of the CDI rate.

Short-term investments in the Parent Company of R$ 4,641 originated from another short-term investment existing in the subsidiary BioEdge. There was a partial redemption of the investment at the subsidiary and the resources was reallocated to the Parent Company.

7. Short-term investments

	Parent Company		Consolidated	
	06/30/2023	12/31/2022	06/30/2023	12/31/2022
Cash Collateral (i)	13,205	7,186	13,205	7,186
Debenture (ii)	66,219	61,875	-	-
Total	79,424	69,061	13,205	7,186
Current	13,205	7,186	13,205	7,186
Non-current	66,219	61,875	-	-

On June 30, 2023 and December 31, 2022 the short-term investments refer exclusively to:

(i) Short-term investment made by the Company in October 2022 and April 2023, yielding 99.5% of the CDI rate. Investment made to create a guarantee to secure the FINEP loan;

(ii) Short-term investment made by the Company in 39.229 units of debenture BFLE11 for R$ 50,897 from Itaú Unibanco S.A. (Itaú), and the restated balance on June 30, 2023 with the restatement of the financial yield is R$ 66,219 (R$ 61,875 in December 31, 2022). On May 30, 2022, the seventh amendment to the private deed for the public issue of simple debentures was signed, extending the maturity to December 2025. This debenture was initially an exclusive operation between the subsidiary BioFlex Agroindustrial S.A and Banco Itaú S.A. As a result of this investment made by the Company, part of BioFlex’s debt under this debenture was transferred to the parent company itself. For the purpose of consolidation this amount is therefore eliminated from the item short-term investments and loans and borrowings;

8. Accounts receivable

	Consolidated	
	06/30/2023	12/31/2022
Accounts receivable	794	2,032
(-) Provision for impairment losses	(652)	-
	142	2,032

(In Thousand Reais)

Receivable schedule

See below an aging list for receivables:

	Consolidated	
	06/30/2023	12/31/2022
Neither past due nor impaired	96	1,287
1 to 30 days past due	-	50
91 to 360 days past due	46	2
More than 1 year past due	-	693
	142	2,032

9. Inventories

	Consolidated	
	06/30/2023	06/30/2023
Consumables (i)	5,797	5,797
Finished goods	25	25
Storeroom materials	2,787	2,748
Total	8,609	8,570

(i) Balance of various consumables used to produce 2G ethanol. One of the main inputs for producing 2G ethanol are the enzymes which are stored in a specific location with a suitable temperature so as not to lose their productive capacity. On June 30, 2023 and December 31, 2022 R$ 4,753, equivalent to 286,000 Kg is held by third parties.

Inventory risk:

- Inventory counts are carried out annually and, when necessary, the corresponding adjustments are recorded. However, in recent years there have been no significant inventory adjustments.

Management valued the inventory based on its recoverable amount on June 30, 2023 and December 31, 2022 as follows:

Movement	Provision
Balances on December 31, 2021	(212)
Use of provision for losses	30
Balances on June 30, 2022	(182)
Balances on December 31, 2022	(182)
Use of provision for losses	-
Balances on June 30, 2023	(182)

(In Thousand Reais)

10. Related-party transactions

The Company has transactions with its direct subsidiaries, indirect subsidiaries, joint ventures, parent companies and associated companies, with the objective of providing funds for the maintenance of its operations. These operations have no remuneration or maturity, as agreed between the parties.

Transactions between related parties refer to loans to supply cash and commercial transactions that refer to transacted amounts of shared costs and other commercial transactions.

On June 30, 2023 and December 31, 2022, the balances are presented as follows:

- Parent Company

		06/30/2023		12/31/2022	
	Ratio	Assets	Liabilities	Assets	Liabilities
Related-party loans					
GranBio LLC (i)	Subsidiary	-	30,520	-	33,044
BioEdge Agroindustrial Ltda. (ii)	Subsidiary	-	45,798	-	11,319
GranInvestimentos S.A. (iii)	Parent Company	-	609	-	-
Total		-	76,927	-	44,363
	Current	-	76,927	-	44,363

- Consolidated

		03/31/2023		12/31/2022	
	Ratio	Assets	Liabilities	Ratio	Assets
Advance to suppliers					
Companhia Energética São Miguel dos Campos (iv)	Joint subsidiary	-	-	12,979	-
Total		-	-	12,979	-
Related-party loans					
GranInvestimentos S. A (iii)	Parent Company	-	609	-	-
Total		-	609	-	-
Other accounts payable to related parties					
Shareholder investment fund (v)	Other	-	29,311	-	27,815
GranInvestimentos S.A. (vi)	Parent Company	-	25,747	-	35,687
Total			55,058	-	63,502
Grand total		-	55,667	12,979	63,502
Current		-	609	12,979	-
Non-current		-	55,058	-	63,502

(In Thousand Reais)

Operations affecting profit or loss for the periods:

	Ratio	04/01/2023 to 06/30/2023	01/01/2023 to 06/30/2023	04/01/2022 to 06/30/2022	01/01/2022 to 06/30/2022
Lease income					
Companhia Energética São Miguel dos Campos (vii)	Joint subsidiary	-	-	4,969	9,939

(i) Interest-free loans taken out from GranBio LLC with a defined maturity;

(ii) Denote the amounts in the Company's current account with its subsidiaries expected to be settled in the short-term. The loans are interest free and have no defined maturity date. In the first quarter of 2023 the short-term investment recorded at BioEdge was redeemed and sent to the Parent Company, as per Note 6. The operation was worth R$ 36,125;

(iii) Cash received from the Parent Company to supply cash for operating activities;

(iv) Denotes the provision of electricity, steam, treated water and inputs to be used during the 2023/2024 crop season in the production process. As all the shares held by BioFlex in CESM (Joint Venture) had been transferred to Usina Caeté S.A., it was no longer presented as a related party. For further information see Note 5.a;

(v) Part of the debentures issued by the indirect parent company BioFlex Agroindustrial S.A. were purchased by an investment fund of the final beneficiaries of GranInvestimentos S.A. (18,000 shares in the updated amount of R$ 29,311), consequently the payable balance of the debentures started to be reclassified as other accounts payable with related parties;

(vi) Part of the debentures issued by the indirect parent company BioFlex Agroindustrial S.A. were purchased in August 2021 by the shareholder GranInvestimentos S.A. for R$ 1.00 (22,771 shares), consequently the balance payable of the debentures started to be reclassified as other accounts payable with related parties. On June 28, 2023, the indirect subsidiary BioFlex AgroIndustrial S.A. purchased in the secondary market 7,345 shares held by GranInvestimentos S.A. for the amount of R$12,247, leaving GranInvestimentos S.A. 15,246 shares in the restated amount of R$25,747;

(vii) Billing referring to the lease of the boiler between the indirect subsidiaries BioFlex Agroindustrial S.A. and Companhia Energética São Miguel dos Campos – CESM. This billing ceased to exist in October 2022, after the sale of property, plant and equipment related to the thermoelectric power plant, as per Note 5 a.

(In Thousand Reais)

Key management personnel compensation

	Parent Company				Consolidated			
	04/01/2023 to 06/30/2023	01/01/2023 to 06/30/2023	04/01/2022 to 06/30/2022	01/01/2022 to 06/30/2022	04/01/2023 to 06/30/2023	01/01/2023 to 06/30/2023	04/01/2022 to 06/30/2022	01/01/2022 to 06/30/2022
Key management personnel compensation	(59)	(116)	(60)	(120)	(333)	(604)	(245)	(506)
Total	(59)	(116)	(60)	(120)	(333)	(604)	(245)	(506)

The amount paid as key management personnel compensation is included in personal expenses disclosed in Note 22.

(In Thousand Reais)

11. Investments

a. Breakdown of balances

	Parent Company	
	06/30/2023	12/31/2022
Direct and indirect subsidiaries	922,505	1,015,825
Total	922,505	1,015,825

b. Direct investments

	Equity		Loss for the period	
	06/30/2023	12/31/2022	06/30/2023	06/30/2022
Investees				
BioEdge Agroindustrial Ltda.	416,043	464,182	(48,139)	(53,102)
BioVertis Produção Agrícola Ltda.	-	-	-	(3,171)
GranBio LLC	506,462	551,643	(13,128)	(12,374)

(In Thousand Reais)

Movement in investments

c. Direct subsidiaries

	Balance on 12/31/2022	Translation adjustments	Investment	Equity result	Balance on 06/30/2023
Subsidiaries					
BioEdge Agroindustrial Ltda.	464,182	-	-	(48,139)	416,043
GranBio LLC (i)	551,643	(42,325)	10,272	(13,128)	506,462
Total investment	1,015,825	(42,325)	10,272	(61,267)	922,505

(i) The amount of R$ 10,272 consists of financial contributions made in the investee based on its cash needs.

	Balance on 12/31/2021	Translation adjustments	Investment	Incorporation	Equity result	Balance on 06/30/2022
Subsidiaries						
BioEdge Agroindustrial Ltda.	379,032	-	-	16,471	(53,102)	342,401
BioVertis Produção Agrícola Ltda.	19,642	-	-	(16,471)	(3,171)	-
GranBio LLC (i)	592,481	(36,728)	8,068	-	(12,374)	551,447
Total investment	991,155	(36,728)	8,068	-	(68,647)	893,848

(i) The amount of R$ 8,068 consists of financial contributions made in the investee based on its cash needs.

(In Thousand Reais)

d. Summary of direct subsidiaries' equity accounts

Direct subsidiaries on June 30, 2023	Assets	Liabilities	Parent Company interest	NCI	Equity
BioEdge Agroindustrial Ltda.	992.892	576.849	416.043	-	416.043
GranBio LLC	575.753	66.861	506.462	2.430	508.892

Direct subsidiaries on December 31,2022	Assets	Liabilities	Parent Company interest	NCI	Equity
BioEdge Agroindustrial Ltda.	1.045.969	581.787	464.182	-	464.182
GranBio LLC	634.009	79.598	551.643	2.768	554.411

(In Thousand Reais)

Direct subsidiaries	Net result 06/30/2023	Net result 06/30/2022
BioEdge Agroindustrial Ltda.	(48,139)	(53,102)
BioVertis Produção Agrícola Ltda.	-	(3,171)
GranBio LLC	(13,128)	(12,374)
	(61,267)	(68,647)

12. Property, plant and equipment

a. Breakdown of carrying amount

- Parent company

	06/30/2023			12/31/2022
	Cost	Depreciation	Net	Net
IT equipment	837	(817)	20	24
Improvements to rented property	688	(52)	636	662
Furniture and fixtures	874	(871)	3	6
Administrative facilities	84	(84)	-	-
Right of use	2,081	(361)	1,720	1,790
	4,564	(2,185)	2,379	2,482

- Consolidated

	06/30/2023			12/31/2022
	Cost	Depreciation	Net	Net
IT equipment	3,255	(3,014)	241	153
Furniture and fixtures	1,726	(1,618)	108	118
Lab plant and equipment	5,175	(4,575)	600	753
Agricultural plant and equipment	39,924	(34,003)	5,921	6,493
Improvements to rented property	4,929	(2,735)	2,194	2,252
Industrial machinery, equipment and facilities	836,790	(164,411)	672,379	691,190
Property, plant and equipment in progress	6,665	-	6,665	3,942
Right of use	2,081	(361)	1,720	1,790
Land	2,086	-	2,086	2,247
Buildings and constructions	42,002	(5,064)	36,938	37,595
Total	944,633	(215,781)	728,852	746,533

(In Thousand Reais)

b. Movement in property, plant and equipment

- Parent company

	Balance on 12/31/2022	Additions	Balance on 06/30/2023
Cost			
Improvements to rented property	688	-	688
Property, plant and equipment in progress	-	-	-
Furniture and fixtures	874	-	874
IT equipment	837	-	837
Administrative facilities	84	-	84
Right of use	2,081	-	2,081
Total	4,564	-	4,564
Depreciation			
Improvements to rented property	(26)	(26)	(52)
Furniture and fixtures	(868)	(3)	(871)
IT equipment	(813)	(4)	(817)
Administrative facilities	(84)	-	(84)
Right of use	(291)	(70)	(361)
Total	(2,082)	(103)	(2,185)
Total property, plant and equipment	2,482	(103)	2,379

	Balance on 12/31/2021	Additions	Balance on 06/30/2022
Cost			
Property, plant and equipment in progress	211,191	-	1,191
Furniture and fixtures	874	-	874
IT equipment	808	7	815
Administrative facilities	84	-	84
Right of use	2,081	-	2,081
Total	5,038	7	5,045
Depreciation			
Furniture and fixtures	(846)	(10)	(856)
IT equipment	(808)	(3)	(811)
Administrative facilities	(82)	(1)	(83)
Right of use	(152)	(69)	(221)
Total	(1,888)	(83)	(1,971)
Total property, plant and equipment	3,150	(76)	3,074

(In Thousand Reais)

- Consolidated

	Balance on 12/31/2022	Additions	Write-offs	Exchange variation	Balance on 06/30/2023
Cost					
IT equipment	3,257	120	-	(122)	3,255
Furniture and fixtures	1,734	-	-	(8)	1,726
Lab plant and equipment	5,495	-	-	(320)	5,175
Agricultural plant and equipment	40,209	-	(285)	-	39,924
Improvements to rented property	4,929	-	-	-	4,929
Industrial machinery, equipment and facilities	846,263	-	-	(9,473)	836,790
Property, plant and equipment in progress	3,942	2,723	-	-	6,665
Right of use	2,081	-	-	-	2,081
Land	2,247	-	-	(161)	2,086
Buildings and constructions	42,284	-	-	(282)	42,002
Total	952,441	2,843	(285)	(10,366)	944,633
Depreciation					
IT equipment	(3,104)	(19)	-	109	(3,014)
Furniture and fixtures	(1,616)	(10)	-	8	(1,618)
Lab plant and equipment	(4,742)	(138)	-	305	(4,575)
Agricultural plant and equipment	(33,716)	(553)	266	-	(34,003)
Improvements to rented property	(2,677)	(58)	-	-	(2,735)
Industrial machinery, equipment and facilities	(155,073)	(18,676)	-	9,338	(164,411)
Right of use	(291)	(70)	-	-	(361)
Buildings and constructions	(4,689)	(526)	-	151	(5,064)
Total	(205,908)	(20,050)	266	9,911	(215,781)
Total property, plant and equipment	746,533	(17,207)	(19)	(455)	728,852

(In Thousand Reais)

	Balance on 12/31/2021	Addition	Writ-off	Incorporation	Exchange variation	Balance on 06/30/2022
Cost						
IT equipment	3,489	7	(253)	(41)	(93)	3,109
Vehicles	20	-	(20)	-	-	-
Furniture and fixtures	2,020	-	(79)	(190)	(7)	1,744
Lab plant and equipment	6,433	-	(98)	(417)	(275)	5,643
Agricultural plant and equipment	43,601	-	(794)	(1,359)	-	41,448
Improvements to rented property	9,543	-	-	-	-	9,543
Machinery, equipment and facilities	1,015,660	-	(184)	(412)	(8,142)	1,006,922
Property, plant and equipment in progress	5,761	-	-	-	-	5,761
Right of use	2,081	-	-	-	-	2,081
Land	2,394	-	-	-	(138)	2,256
Buildings and constructions	44,925	-	-	(853)	(242)	43,830
Total	1,135,927	7	(1,428)	(3,272)	(8,897)	1,122,337
Depreciation						
IT equipment	(3,481)	(3)	253	41	95	(3,095)
Vehicles	(20)	-	20	-	-	-
Furniture and fixtures	(1,827)	(36)	76	190	7	(1,590)
Lab plant and equipment	(4,922)	(348)	72	417	231	(4,550)
Agricultural plant and equipment	(31,996)	(2,167)	520	1,359	-	(302,284)
Improvements to rented property	(3,299)	(125)	-	-	-	(3,424)
Machinery, equipment and facilities	(192,583)	(13,110)	122	412	7,405	(197,754)
Right of use	(152)	(69)	-	-	-	(221)
Buildings and constructions	(4,680)	(515)	-	853	107	(4,235)
Total	(242,960)	(16,373)	1,063	3,272	7,845	(247,153)
Total property, plant and equipment	892,967	(16,366)	(365)	-	(1,052)	875,184

Property, plant and equipment in progress

On June 30, 2023 and December 31, 2022 the balance of property, plant and equipment in progress refers to expenses to upgrade consumables processing and feeding machinery and upgrades to the dedusting system. In addition, a consultancy was hired to project the expansion of 2G ethanol plant's production capacity from 30 million to 60 million liters/year. Expansion expenses started in the first quarter of 2023.

Guarantees

The residual carrying amount of property, plant and equipment pledged as collateral for loans and borrowings amounts to R$ 714,020 on June 30, 2023. For more information see Note 15 c.

Write-off of assets

On June 30, 2023 the amount of R$ 19 represents the write-off for the sale of a vehicle. For more information see Note 23.

(In Thousand Reais)

13. Intangible assets

- Consolidated

	Software	Development (Yeast and Energy cane)	Joint development (Energy cane)	Licenses and intellectual property	Goodwill	Total
Balance on December 31, 2021	116	28,500	-	494,883	129,931	653,430
Addition	-	-	-	577	-	577
Write-off	-	(495)	-	(225)	-	(720)
Amortization (a)	(5)	(616)	-	(8,383)	-	(9,004)
Exchange variation	-	-	-	(29,975)	(7,975)	(37,950)
Balance on June 30, 2022	111	27,389	-	456,877	121,956	606,333
Balance on December 31, 2022	111	11,890	-	447,077	121,484	580,562
Addition	-	-	6,484	739	-	7,223
Amortization (a)	(111)	-	(270)	(8,205)	-	(8,586)
Exchange variation	-	-	-	(33,637)	(9,278)	(42,915)
Balance on June 30, 2023	-	11,890	6,214	405,974	112,206	536,284

(a) Amortization expenses were recognized in administrative and general expenses.

- Development (yeast and energy cane) - Development of genetically modified yeast to ferment cellulose sugar in the amount of R$ 11,890 on June 30, 2023. On June 30, 2022 the balance comprises R$ 11,890 for the development of yeast and R$ 15,499 for the development of proprietary varieties of energy cane, which were sold on September 2022 to Nussed Group;
- Joint development (energy cane) – GranBio signed a global alliance with Nuseed Group until 2034 for the technical development of sugarcane varietals as a source of biomass for second-generation biochemicals and fuels (2G). The alliance with Nuseed guarantees an exclusive licensing agreement for energy cane in 2G biorefineries worldwide. In January 2023, R$ 6,484 (USD 1,250) was paid for the first phase of the partnership;
- Licenses and intellectual property – Amounts referring to the development of licenses and intellectual property in the development of nanocellulose technology, biorefineries and commercial and industrial secrets. On March 31, 2019, the amount of R$ 368,086 was recognized referring to the intangible assets identified by Management in the business combination between Granbio LLC and the companies GranAPI LLC, API- Property-Intelectual Holdings LLC, American Process Conversion Technologies LLC and American Process Conversion Technologies Holdco LLC. The amount of technology licenses and intellectual property was calculated based on the expected revenue generated by the sale of licenses to third parties, based on the existing commercial pipeline and growth expected for the number of projects for converting biomass into cellulosic ethanol, biochemicals and nanocellulose;
- Goodwill – Value refers to the expected future earnings of the companies GranAPI LLC, API-Propriety Intellectual Holdings LLC, American Process Conversion Technologies LLC and American Process Conversion Technologies Holdco LLC, through their existing technology. Management used the relief-from-royalty method to estimate the fair value of these companies' technology. This method assumes that, rather than paying to acquire a business, a company would be willing to pay to exploit the benefits related to this class of assets. This goodwill is not deductible for tax purposes.

14. Impairment analysis

a. Property, plant and equipment

At each annual reporting date, the Group checks whether there is evidence that the carrying amount of a definite-lived asset has incurred impairment. If there is evidence of impairment, a test is carried out to quantify the asset's recoverable value. The recoverable value of an asset is determined by the higher of: (a) its fair value less estimated costs to sell and (b) its value in use. The value in use is measured based on the discounted cash flows (before tax) deriving from the continuous use of an asset until the end of its useful life.

Although management understands that there is evidence that its property, plant and equipment has suffered impairment, given that the fair value less costs to sell indicates that the construction of a plant similar to that of BioFlex Agroindustrial S.A. would result in values higher than the depreciated carrying amount, due to the short operational history resulting from strategic decisions made by Management, which considered micro and macroeconomic issues for past periods and investments in innovation, the Group also performs an impairment test on the value in use for the property, plant and equipment intended for the production of 2G ethanol at BioFlex Agroindustrial S.A., substantially developed based on internal management assumptions.

(In Thousand Reais)

Management's assessment shows that in the last year there are no indications of a significant change in their calculations and analyses that could lead to the need to recognize impairment losses on property, plant and equipment. However, if current or future results are not consistent with the estimates and assumptions used in the estimated future cash flows and determination of the property, plant and equipment's fair value, the Company may be exposed to losses.

On June 30, 2023, the Group assessed its property, plant and equipment and did not identify any evidence of impairment.

b. Intangible assets and goodwill

Goodwill resulting from business combinations and indefinite-lived intangible assets are tested for impairment at least once a year, in December.

As regards the impairment test for the subsidiary GranBio LLC, on December 31, 2022 the Group used a 10-year cash flow plus perpetuity, which reflects the expected use of the recently implemented asset and the investments being made to achieve commercial capacity in an ongoing operation based on financial estimates approved by Senior Management.

The licenses' sale prices were determined based on evidence from target markets. The opex projection was compiled based on the history of costs incurred adjusted to an industrial capacity level of use.

On June 30, 2023, the Group assessed its intangible assets and did not identify any evidence of impairment.

15. Loans and borrowings

				Parent Company		Consolidated	
Type	Index	Charges	Maturity	06/30/2023	12/31/2022	06/30/2023	12/31/2022
FINEP – Financing	TJLP	2.00% - 5.00%	Feb/29	128,435	132,376	128,435	132,376
Working capital	CDI	+1.19	Dec/27	-	-	188,353	175,072
Honoring bank guarantees	CDI	-	Jun/22	-	-	37,068	34,805
				128,435	132,376	353,856	342,253
Current				9,380	9,346	46,448	44,152
Non-current				119,055	123,030	307,408	298,101

Short-term debt had been putting pressure on the Group's cash flow. Management concluded some renegotiations with financial institutions to lengthen the debt profile in order to readjust its operating cash flow. See Note 1.

Finep - Financing

FINEP financing was contracted with the objective of supporting the research and development projects for biomass (Energy Cane Vertix) and yeast, in addition to the development of technologies for converting biomass into biochemicals and biofuel.

(In Thousand Reais)

Working capital and Honoring Bank Guarantees

In FY 2021, the Company carried out a restructuring of its loans and borrowings with the main creditors, and the guarantees on loans and borrowings from public banks were exercised by private banks. Negotiations were made with some of these private banks and the renegotiated debt was reclassified as Working Capital. As of June 30, 2023 the payable balance of R$ 37,068 to Banco Itaú is being negotiated with the financial institution, in order to lengthen the debt with amortization 100% allocated in the long-term and without the need for an initial cash disbursement from current operations.

a. Debt amortization schedule

See below the contractual maturities of financial liabilities:

	Parent Company		Consolidated	
	03/30/2023	12/31/2022	06/30/2023	12/31/2022
1 year	9,380	9,346	46,448	44,152
2 years	22,991	14,798	54,550	20,025
3 years	25,701	27,257	50,286	55,865
4 years and onwards	70,363	80,975	202,572	222,211
Total	128,435	132,376	353,856	342,253

b. Reconciliation of equity changes with cash flows arising from financing activities

	Parent Company	Consolidated
Balances on December 31, 2021	147,439	551,017
Amortization of loans and borrowings (principal)	(13,358)	(13,358)
Provision for interest on loans and borrowings	8,150	37,718
Amortization of loans and borrowings (interest)	(8,064)	(12,297)
Balances on June 30, 2022	134,167	563,080
Balances on December 31, 2022	132,376	342,253
Amortization of loans and borrowings (principal)	(2,909)	(2,909)
Provision for interest on loans and borrowings	7,082	22,626
Amortization of loans and borrowings (interest)	(8,114)	(8,114)
Balances on June 30, 2023	128,435	353,856

c. Guarantees

The Company's debts are secured by bank guarantee and corporate guarantee and real guarantees. Real guarantees are imposed on property, plant and equipment in favor of BNDES, FINEP, Bradesco and Banco do Brasil. The institutions have mortgages on the industrial assets of the subsidiary BioFlex, and FINEP also has a guarantee on agricultural equipment. See amounts of property, plant and equipment given as collateral in Note 12.

(In Thousand Reais)

d. Covenants

The Group has loans and borrowings in the parent company and in the consolidated statements, maturing in February 2029.

The loans and borrowings contain non-financial operating covenants establishing a range of obligations, listed below:

- Compliance with environmental obligations and legislation, the biosafety quality certificate (CQB) and the Gene Pool Management Council (CGEN);
- Submit federal, state and municipal tax debt clearance certificates;
- Have not incurred protests for indisputable debts;
- Pausing of operating activities;
- Corporate and equity restructuring.

The Executive Board and its legal advisers understand there was no breach of covenants during the first half of 2023 until the date of approval of these interim individual and consolidated financial statements.

16. Trade payables

	Parent Company		Consolidated	
	06/30/2023	12/31/2022	06/30/2023	12/31/2022
Domestic payables	560	562	10,389	10,584
Overseas payables	-	-	25,831	29,086
Total	560	562	36,220	39,670

Trade payables are mainly due to the purchase of raw materials for the 2G ethanol production process and independent auditing and consultancy services acquired.

The Group has not yet developed a proprietary enzyme solution, which means that its technological and licensing process depend on enzyme suppliers, which are currently sourced exclusively from Novozymes North America INC.

17. Advances to clients

	Consolidated	
	06/30/2023	12/31/2022
Collaboration agreement - NextChem (i)	2,410	5,739
Current	2,410	5,739

(i) On July 31, 2020, the Group established a strategic alliance with NextChem, a subsidiary of the Italian engineering group Maire Tecnimont with a worldwide presence in renewable energy. This is a 10-year partnership and has the following values and premises:

- USD 4,000 thousand received after signing the contract;
- USD 4,000 thousand will be received after the technology license has been sold;
- USD 4,000 thousand will be received after the plant starts production for the sale of the first license or the sale of the second technology license;
- USD 3,000 thousand will be received in engineering services to optimize the technology and develop a “process design package”.

(In Thousand Reais)

The first tranche of R$ 21,855 (USD 4,000) thousand was received in August 2020 and recognized as deferred income, in which the amortization will occur within 40 months, according to the contract. The contract has a total value of R$ 78,050 (USD 15,000 thousand), with residual tranches of R$ 57,236 (USD 11,000 thousand), of which R$ 41,626 (USD 8 thousand) will be received in cash and R$ 15,610 (USD 3,000 thousand) in services provided by Nextchem. These amounts were converted to dollars at the time of the operation.

There was a partial pro-rata amortization of the 40 months (USD 100 per month) of the contract, with the carrying amount of R$ 2,410 (USD 500 thousand) converted into the exchange rate on June 30, 2023.

18. Provision for contingencies

The Company and its subsidiaries are defendants in lawsuits rated as probable defeats by our legal advisers in the consolidated amount of R$ 167 as of June 30, 2023.

The Company and its subsidiaries are defendants in lawsuits rated as possible defeats by our legal advisers in the consolidated amount of R$ 3,501 as of June 30, 2023 (R$ 4,349 as of December 31, 2022), for which no provisions were recorded.

19. Equity

a. Share capital

The ownership structure is as follows:

	June 30, 2023		
	Capital - R$	No. of shares	Interest
Shareholder			
GranInvestimentos S/A	377,662	93,038,165	86%
BNDES Participações S/A	600,000	15,094,340	14%
Total	977,662	108,132,505	100%

	December 31, 2022		
	Capital - R$	No. of shares	Interest
Shareholder			
GranInvestimentos S/A	377,662	93,038,165	86%
BNDES Participações S/A	600,000	15,094,340	14%
Total	977,662	108,132,505	100%

b. Advance for future capital increase – (AFAC)

On December 30, 2022 the shareholder GranInvestimentos S.A. resolved, in a private instrument of advance for future capital increase, to transfer to the AFAC the amount of R$ 341,059, which it had receivable from its direct subsidiary GranBio Investimentos S.A. referring to the amounts sent for supply cash from operating activities which will be converted into registered common shares. The Company expects to pay in capital by the end of FY 2023.

(In Thousand Reais)

c. Capital reserve

In a Shareholders' Agreement signed on April 30, 2013 between BNDESPAR and GranInvestimentos S.A. (shareholders), it was stipulated that the shares were initially issued at R$ 39.75 each. Capital contributions after the signature of this Agreement had the share price updated by the Extended National Consumer Prices Index (IPCA). The variation in the share price between the date of the Shareholders' Agreement and the date of the effective receipt of the capital contribution was multiplied by the total number of paid-in shares, with this variation being recorded as a Capital Reserve.

d. Asset and liability valuation adjustments

The asset and liability valuation adjustments item includes accumulated adjustments for foreign currency differences resulting from the translation of the interim individual and consolidated financial statements of foreign operations. In the six-month period ended June 30, 2023, a translation of R$ 42,325 was recognized. On June 30,2023, the balance of the item is R$ 151,288.

20. Revenue from goods and services sold

The table below breaks down the company’s gross revenue in accordance with CPC 47- item 112A.

	Consolidated			
	04/01/2023 to 06/30/2023	01/01/2023 to 06/30/2023	04/01/2022 to 06/30/2022	01/01/2022 to 06/30/2022
Revenue from collaboration agreement (i)	1,486	3,044	2,023	4,627
Revenue from royalties (ii)	-	-	342	342
Revenue	1,486	3,044	2,365	4,969
Revenue from equipment leasing (iii)	-	-	4,970	9,939
Other revenues	-	-	4,970	9,939
Total revenue	1,486	3,044	7,335	14,908
Sales taxes	-	-	(492)	(951)
Revenue from goods and services sold	1,486	3,044	6,843	13,957

(i) Revenue of R$ 3,044 (USD 600) due to recognition of revenue from the contract with Nextchem.
(ii) Operating revenue from energy cane royalties.
(iii) Operating revenue of the indirect subsidiary BioFlex Agroindustrial S.A. arising from the leasing of electricity cogeneration assets with CESM.

For further information on operating revenue see Note 27 - Segment Reporting.

(In Thousand Reais)

21. Cost of goods sold and services rendered

	Consolidated			
	04/01/2023 to 06/30/2023	01/01/2023 to 06/30/2023	04/01/2022 to 06/30/2022	01/01/2022 to 06/30/2022
Cost from commercial partner and services provided (i)	(254)	(2,999)	(2,734)	(6,041)
Leasing cost (ii)	-	-	(1,673)	(3,347)
Idleness cost (iii)	(10,199)	(20,595)	(4,574)	(9,177)
	(10,453)	(23,594)	(8,981)	(18,565)

(i) Operational cost of US indirect subsidiaries;
(ii) Depreciation cost of leased thermoelectric assets;
(iii) Idleness cost of the 2G ethanol production plant of the indirect subsidiary BioFlex.

(In Thousand Reais)

22. Administrative and general expenses

	Parent Company				Consolidated			
	04/01/2023 to 06/30/2023	01/01/2023 to 06/30/2023	04/01/2022 to 06/30/2022	01/01/2022 to 06/30/2022	04/01/2023 to 06/30/2023	01/01/2023 to 06/30/2023	04/01/2022 to 06/30/2022	01/01/2022 to 06/30/2022
Depreciation and amortization (i)	(50)	(102)	(42)	(84)	(4,426)	(9,256)	(4,763)	(9,989)
Services rendered (ii)	(1,044)	(2,626)	(1,357)	(3,349)	(3,907)	(7,897)	(3,526)	(7,580)
Personnel expenses	(39)	(82)	(89)	(205)	(1,309)	(2,856)	(1,725)	(3,651)
Taxes and fees	(369)	(474)	(131)	(343)	(1,220)	(2,104)	(393)	(814)
Insurance	(46)	(92)	(45)	(91)	(1,051)	(1,992)	(1,123)	(3,823)
General expenses (iii)	(9)	(10)	(12)	(37)	(1,188)	(1,727)	(214)	(562)
Occupation expenses	(60)	(128)	(40)	(70)	(77)	(163)	(75)	(172)
Travel	(18)	(19)	(17)	(19)	(168)	(217)	(71)	(92)
Vehicle expenses	-	-	-	-	-	(13)	(14)	(39)
Selling expenses	-	(4)	(4)	(4)	(2)	(10)	(4)	(4)
Total	(1,635)	(3,537)	(1,737)	(4,202)	(13,348)	(26,235)	(11,908)	(26,726)

(i) Depreciation of other assets such as furniture, vehicles and IT equipment are recognized as an administrative and general expense. In the consolidated quarterly statement, the depreciation expense on June 30, 2023 was R$ 670 (R$ 985 on June 30, 2022) and the amortization expense for intangible assets on June 30, 2023 was R$ 8,586 (R$ 9,004 on June 30, 2022);

(ii) Denotes expenses on third-party services provided such as audit, tax and legal;

(iii) General expenses with mail, fuel, materials for use and consumables, costs with legal proceedings, property security and others.

(In Thousand Reais)

23. Other operating income

	Consolidated			
	04/01/2023 to 06/30/2023	01/01/2023 to 06/30/2023	04/01/2022 to 06/30/2022	01/01/2022 to 06/30/2022
Proceeds from sale of property, plant and equipment (i)	-	55	-	-
Other operating income	-	-	2,136	2,153
Total other income	-	55	2,136	2,153
Provision for related-party losses (ii)	-	-	(4,115)	(10,484)
Proceeds from sale of property, plant and equipment (iii)	-	-	115	(393)
Other operating income	(645)	(685)	-	-
Total other expenses	(645)	(685)	(4,000)	(10,877)
Total	(645)	(630)	(1,864)	(8,724)

(i) Proceeds from the sale of a vehicle authorized by the Company's management to be used as payment to a supplier. This transaction did not generate cash, as stated in Note 12;

(ii) Provision for reducing impairment of accounts receivable with the hereto Joint Venture Companhia Energética de São Miguel dos Campos (CESM) arising from the leasing of the boiler. The cash flow projected at the time was lower than the total balance receivable;

(iii) Sale of equipment and obsolete property, plant and equipment of the indirect subsidiary BioFlex Agroindustrial S.A.

(In Thousand Reais)

24. Net financial income/loss

	Parent Company				Consolidated			
Financial costs	04/01/2023 to 06/30/2023	01/01/2023 to 06/30/2023	04/01/2022 to 06/30/2022	01/01/2022 to 06/30/2022	04/01/2023 to 06/30/2023	01/01/2023 to 06/30/2023	04/01/2022 to 06/30/2022	01/01/2022 to 06/30/2022
Bank expenses	(506)	(883)	(36)	(40)	(508)	(887)	(39)	(44)
IOF (tax on financial operations)	(20)	(41)	(17)	(31)	(19)	(40)	(17)	(32)
Interest expenses (i)	(140)	(194)	(97)	(188)	(2,586)	(4,988)	(2,266)	(4,028)
Interest on loans and borrowings	(3,429)	(7,082)	(3,842)	(8,150)	(10,798)	(22,626)	(20,463)	(37,718)
Exchange variation	-	-	(3,168)	-	-	-	(6,250)	-
	(4,095)	(8,200)	(7,160)	(8,409)	(13,911)	(28,541)	(29,035)	(41,822)
Financial revenue								
Interest received	-	-	-	-	421	849		51
Financial discounts obtained	-	-	-	-	14	135	48	57
Earnings on investments	3,439	6,086	1,684	3,138	1,282	3,255	1	1
Exchange variation	1,656	2,525	-	2,169	3,264	4,979		4,227
	5,095	8,611	1,684	5,307	4,981	9,218	49	4,336
Net financial income/loss	1,000	411	(5,476)	(3,102)	(8,930)	(19,323)	(28,986)	(37,486)

(i) Interest arising mainly from debentures, interest and fines for late payment of taxes, suppliers and financial charges with guarantees of loans with financial institutions.

(In Thousand Reais)

25. Accumulated tax losses

a. Amounts recognized in profit or loss for the period – Consolidated

	Consolidated 06/30/2023	Consolidated 06/30/2022
Current income tax and social contribution expense		
Current year expense	(362)	-
Total		-
Deferred income tax and social contribution expense		
Temporary difference:		
Realization through amortization of intangible assets	2,369	2,370
	2,369	2,370

b. Deferred tax assets not recognized - Consolidated

The Group did not generate taxable profit in previous years and, therefore, there is increased doubt about whether future taxable profit will be available in the foreseeable future to realize deferred tax assets. As a result, deferred tax assets were not recognized on June 30, 2023.

For the Brazilian companies, accumulated tax losses and the negative base of social contribution do not expire, however, they can be offset only up to the limit of 30% of annual taxable earnings. The total income tax loss and negative base of social contribution is R$ 899,535 on June 30, 2023 (R$ 848,268 on December 31, 2022).

For North American companies, tax losses accrued prior to December 31, 2017 can be used over 20 years and there is no taxable income limit for the use of these losses. Tax losses after December 31, 2017 can be carried forward indefinitely and can be used to offset only 80% of current year's taxable income. The total tax loss is R$ 142,433 on June 30, 2023 (R$ 122,417 on December 31, 2022).

The tax returns of all Group companies are subject to tax inspections and revisions by the tax authorities for varying periods. As a result of these inspections and reviews, authorities may question the methodologies, criteria and interpretations of the legislation, and consequently, change the amounts recognized by the Company in the quarterly report and/or result in legal challenges.

(In Thousand Reais)

c. Movements in deferred tax balances

	Consolidated
Opening net balance on December 31, 2021	57,075
Realization through amortization of intangible assets	(2,370)
Exchange variation on translating taxes from the functional currency to the presentation currency	(3,578)
Closing net balance on June 30, 2022	51,127
Opening net balance on December 31, 2022	48,493
Realization through amortization of intangible assets	(2,369)
Exchange variation on translating taxes from the functional currency to the presentation currency	(3,585)
Closing net balance on June 30, 2023	42,539

d. Tax benefit

The indirect subsidiary BioFlex Agroindustrial S.A. has a benefit from the federal tax authority and the Northeast Development Agency (SUDENE) awarding a nonreturnable entitlement to a 75% reduction in the IRPJ and Surcharge in the period 01/01/2015 to 12/31/2024.

26. Financial instruments and risk management

Operations with financial instruments are fully recognized in the accounts and restricted to cash and cash equivalents, accounts receivable, loans and borrowings, and other accounts receivable and payable from related parties, loans, financing, trade payable and other accounts payable.

The Group and its direct and indirect subsidiaries do not invest in derivatives or any other risky assets on a speculative basis.

The Group and its direct and indirect subsidiaries assess such financial assets and liabilities with respect to market value was conducted on the basis of available information and appropriate assessment methods. However, the interpretation of market data and selection of assessment methods requires considerable judgment and estimates to calculate the most appropriate realizable value. As a result, the estimates do not necessarily indicate the values that could be realized in the current market.

The activities of the Company and its direct and indirect subsidiaries expose them to various financial risks: credit risk, liquidity risk and market risk (including interest rate risk), as described below:

a. Credit risk

Credit risk is the risk of financial loss to the Company if a client or counterparty to a financial instrument fails to meet its contractual obligations. This risk is primarily posed by trade receivables.

(In Thousand Reais)

The carrying amount of financial assets represents the maximum credit exposure.

The Company has a credit policy whose purpose is to set procedures for granting loans in business transactions that are in line with the required levels of quality, fastness and security.

The Group determines credit limits by analyzing the client's credit standing, considering: (i) onboarding information (ii) economic and financial information and (iii) historical purchases and payments.

b. Liquidity risk

The cautious management of liquidity risk implies keeping enough cash and securities and credit facilities to be able to settle market positions. Due to the dynamic nature of their businesses, the Group and its direct and indirect subsidiaries use flexible funding by maintaining bank credit facilities.

Management monitors the level of the Company and its direct and indirect subsidiaries' liquidity, considering the expected cash flow and cash and cash equivalents. Furthermore, the liquidity management policy of the Company and its direct and indirect subsidiaries entails projecting cash flows and considering the level of net assets required to achieve these projections and maintain the debt financing plans.

Management is continuing to look into alternatives to guarantee a balanced capital structure. See further information in Note 1.

The following are the remaining contractual financial liability maturities and exclude the impact of netting agreements:

	Parent Company				
Non-derivative financial liabilities	Carrying Amount	6 months or less	6 to 12 months	1 to 3 years	More than 3 years
Loans and borrowings*	128,435	5,103	5,551	103,672	131,407
Trade payables	560	560	-	-	-
Related-party loans	76,927	76,927	-	-	-
Accounts payable	77	77	-	-	-
	205,999	82,667	5,551	103,672	131,407

	Consolidated				
Non-derivative financial liabilities	Carrying Amount	6 months or less	6 to 12 months	1 to 3 years	More than 3 years
Loans and borrowings*	353,856	24,861	26,615	301,928	246,160
Trade payables	36,220	36,220	-	-	-
Related-party loans	609	609	-	-	-
Accounts payable*	4,514	1,555	-	2,959	-
	395,199	63,245	26,615	304,887	246,160

(*) Amounts in each age range have projected interest to be incurred.

The maturity analyses of the Group do not project cash flows that could occur significantly earlier or at significantly different amounts.

(In Thousand Reais)

- Market risk

The Group is exposed to interest-rate changes, charged on its loans and borrowings and exchange variation on the assets and liabilities of the overseas-based direct and indirect subsidiaries. To minimize possible impacts triggered by these changes, the Group adopts the policy of diversifying these contracts. The Group is primarily exposed to changes in CDI and TJLP interest rates, which are applied to its loans and borrowings.

At the quarterly reporting date, the profile of the Company's financial instruments yielding interest was:

	Carrying amount			
	Parent Company		Consolidated	
Variable-income instruments	06/30/2023	12/31/2022	06/30/2023	12/31/2022
Liabilities				
Loans and borrowings (CDI)	-	-	(225,421)	(209,877)
Loans and borrowings (TJLP)	(128,435)	(132,376)	(128,435)	(132,376)
Total	(128,435)	(132,376)	(353,856)	(342,253)

The profile of the assets and liabilities resulting from the consolidation of the direct and indirect subsidiaries in USD as the functional currency has been summarized below, and is exposed to exchange variation:

	Consolidated	
Instruments exposed to exchange variation	06/30/2023	12/31/2022
Assets		
Cash and cash equivalents	142	105
Accounts receivable	142	1,857
Other financial assets	52,102	56,932
	52,386	58,894
Liabilities		
Trade payables	(5,300)	(6,858)
Other accounts payable	(5,234)	(6,188)
Accounts payable	(11,378)	(12,319)
	(21,912)	(25,365)

Cash flow sensitivity analysis for variable-rate instruments and exchange variation

The sensitivity analysis took into account the loans and borrowings which are restated by the CDI and TJLP indexes.

(In Thousand Reais)

The sensitivity analysis on interest rates on loans and borrowings considers an increase and reduction of 25% and 50% in interest rates and how this would impact equity and results. This analysis takes into account the amounts presented in the quarterly statements as of June 30, 2023. Except for the previously mentioned 25% and 50% variation, no other changes were projected:

						06/30/2023
Interest rate exposure	Balance	Probable	25%	50%	-25%	-50%
Loans and borrowings						
TJLP	(128,435)	(9,466)	(11,832)	(14,198)	(7,099)	(4,733)
CDI	(225,421)	(30,770)	(38,462)	(46,155)	(23,077)	(15,385)
Profit or loss for the period	(353,856)	(40,236)	(50,294)	(60,353)	(30,176)	(20,118)

The interest rates the Company is subject to, based on projections of these rates in a probable scenario and the sensitivity analysis, are the following:

					06/30/2023
	Probable	25%	50%	-25%	-50%
TJLP (i)	7.37%	9.21%	11.06%	5.53%	3.69%
CDI (ii)	13.65%	17.06%	20.48%	10.24%	6.83%

(i) Interest rates based on information available at FINEP. Source: FINEP;
(ii) Interest rates based on information available at CETIP.

The sensitivity analysis into the exchange rates with the 25% and 50% increase and decrease in the consolidated figures is as follows, including the most likely USD variation used for translation on June 30, 2023. On June 30, 2023 the USD exchange rate was R$ 5.0804 to the USD:

Exposure to exchange rates	Carrying amount in R$	Probable - USD	25%	50%	-25%	-50%
Assets	52,386	10,870	13,096	26,193	(13,096)	(26.193)
Liabilities	(21,912)	(4,547)	(5,478)	(10,956)	5,478	10.956
Exposure in profit or loss for the period		6.323	7,618	15,237	(7,618)	(15,237)

For the effects of the investments in overseas subsidiaries, see below the sensitivity analysis with the probable scenario for the future exchange rate:

					06/30/2023
	Probable	25%	50%	-25%	-50%
US dollar (USD)	4.8192	6.0240	7.2288	3.6144	2.4096

(In Thousand Reais)

Capital management

The objective of the Company´s capital management is to ensure that it maintains its strong credit rating with the financial institutions and its excellent capital ratio, in order to support the Company´s business and maximize value for its shareholders. The Group and its direct and indirect subsidiaries control their capital structure by making adjustments and adapting to the existing economic conditions. In its net debt structure the Group includes loans and borrowings less cash and cash equivalents and short-term investments.

	Parent Company		Consolidated	
	06/30/2023	12/31/2022	06/30/2023	12/31/2022
Cash and cash equivalents	4,642	1	4,790	64,723
Short-term Investments	13,205	7,186	13,205	7,186
(-) Loans and borrowings	(128,435)	(132,376)	(353,856)	(342,253)
Net debt	(110,588)	(125,189)	(335,861)	(270,344)
Equity	801,501	908,219	803,931	910,987
Equity and net debt	690,913	783,030	468,070	640,643

Classification of financial instruments

The table below shows the main financial instruments by category.

Parent Company

	Amortized cost	
Financial asset	06/30/2023	12/31/2022
Cash and cash equivalents	4,642	1
Total	4,642	1
Liabilities		
Trade payable	560	562
Related-party loans	76,927	44,363
Loans and borrowings	128,435	132,376
Accounts payable	1,916	2,069
Total	207,838	179,370

	Fair value through profit or loss	
Financial assets	06/30/2023	12/31/2022
Short-term investments	79,424	69,091
Total	79,424	69,091

(In Thousand Reais)

Consolidated

	Amortized cost	
Financial assets	06/30/2023	12/31/2022
Cash and cash equivalents	4,790	64,723
Accounts receivable	142	2,032
Total	4,932	66,755
Liabilities		
Trade payable	36,220	39,670
Loans and borrowings	353,856	342,253
Related-party loans	609	-
Other accounts payable to related parties	55,058	63,502
Other accounts payable	4,514	5,026
Total	450,257	450,451

	Fair value through profit or loss	
Financial assets	06/30/2023	12/31/2022
Short-term investments	13,205	7,186
Total	13,205	7,186

The fair values of the financial instruments presented do not significantly vary from the balances presented in the statement of financial position.

27. Segment reporting

Basis for segmentation

The Group has the following 3 strategic divisions, which are its reportable segments. These divisions offer different products and services, and are managed separately because they require different technologies. The following summary describes the operations of each reportable segment of the Company:

Reportable segments	Operation
BioVertis	Company engaged in the experimentation, development, plantation, production and collection of biomass, i.e. Vertix energy cane and sugarcane straw.
BioFlex	Production of biomass, processing biomass for the production and sale of biofuel, electricity, biochemicals and pharma chemicals, technological research and development, sale of sugarcane straw, bagasse and biomass.
Biotech	Development of technology to convert biomass into cellulose ethanol, biochemicals and nanocellulose.

Information about reportable segments

Information related to each reportable segment is set out below.
The performance is assessed based on final net income, as Management believes that this information is the most important for assessing the results of the respective segments:

(In Thousand Reais)

	June 30, 2023				
	BioVertis	BioFlex	Biotech	Other	Total
Revenue from goods and services sold	-	-	3,044	-	3,044
Cost of goods sold and services rendered	-	(20,595)	(2,999)	-	(23,594)
Gross (Loss)	-	(20,595)	45		(20,550)
Operating income (expenses)					
Administrative expenses	-	(6,264)	(7,172)	-	(13,436)
Depreciation and amortization	-	(566)	(8,318)	-	(8,884)
Other income (expenses)	-	(135)	(495)	-	(630)
	-	(6,965)	(15,985)	-	(22,950)
Net (loss) before financial income and expenses	-	(27,560)	(15,940)		(43,500)
Financial income	-	3,316	121	-	3,437
Financial expenses	-	(24,632)	(16)	-	(24,648)
Net financial result	-	(21,316)	105	-	(21,211)
Deferred income tax and social contribution	-	-	2,369	-	2,369
Net (loss) for the period – Subtotal	-	(48,876)	(13,466)	-	(62,342)
Other					(2,389)
(Net (loss) for the Period					(64,731)

Segment reporting – Assets	BioVertis	BioFlex	Biotech	Other	Total
Inventories	-	8,609	-	-	8,609
Property, plant and equipment	-	721,286	5,187	2,379	728,852
Intangible	-	11,890	518,180	6,214	536,284

Segment reporting – Liabilities	BioVertis	BioFlex	Biotech	Other	Total
Loans and borrowings	-	(225,421)	-	(128,435)	(356,856)
Other accounts payable	-	(756)	(1,842)	(1,916)	(4,514)

(In Thousand Reais)

	June 30, 2022				
	BioVertis	BioFlex	Biotech	Other	Total
Revenue from goods and services sold	310	9,020	4,627		13,957
Cost of goods sold and services rendered	-	(12,524)	(6,041)		(18,565)
Gross (Loss)	310	(3,504)	(1,414)	-	(4,608)
Operating income (expenses)					
Administrative expenses	(1,836)	(5,658)	(5,122)		(12,616)
Depreciation and amortization	(994)	(421)	(8,490)		(9,905)
Other income (expenses)	(596)	(9,164)	(59)		(9,819)
	(3,426)	(15,243)	(13,671)	-	(32,340)
Net (loss) before financial income and expenses	(3,116)	(18,747)	(15,085)	-	(36,948)
Financial income	15	2,101	51		2,167
Financial expenses	(485)	(36,039)	(27)		(36,551)
Net financial result	(470)	(33,938)	24	-	(34,384)
Deferred income tax and social contribution	-	-	2,370		2,370
Net (loss) for the period – Subtotal	(3,586)	(52,685)	(12,691)		(68,962)
Other	-	-	-		(6,212)
Net (loss) for the period	(3,586)	(52,685)	(12,691)	(6,212)	(75,174)

Segment reporting – Assets	BioVertis	BioFlex	Biotech	Other	Total
Inventories	-	8,167	-	-	8,167
Property, plant and equipment	2,972	859,536	9,602	3,074	875,184
Intangible	27,389	112	578,832	-	606,333

Segment reporting – Liabilities	BioVertis	BioFlex	Biotech	Other	Total
Loans and borrowings	(7,462)	(539,049)	-	(16,569)	(563,080)
Other accounts payable	(257)	(16,780)	(2,813)	(116)	(19,966)
Segment reporting – Liabilities	-	-	-	(1,985)	(1,985)

28. Earnings (loss) per share

In compliance with technical pronouncement CPC 41 (IAS 33) - Earnings per share, approved by CVM Resolution 636, the Company presents the following information on earnings per share for the period ended June 30, 2023 and 2022.

Basic: the basic calculation of earnings per share is done by dividing the profit (loss) for the period, attributed to the holders of the Parent Company's common shares, by the weighted average number of common shares available during the period (denominator).

Diluted: the calculation of diluted earnings per share has been based on the following profit or loss attributable to the holders of the Company's common shares and weighted-average number of common shares for the effects of all dilutive potential common shares. The Company does not have any potential common shares.

The table below provides data on earnings and the shares used in calculating basic and diluted earnings per share, which are identical because the Company does not have potential common shares.

	04/01/2023 to 06/30/2023	01/01/2023 to 06/30/2023	04/01/2022 to 06/30/2022	01/01/2022 to 06/30/2022
Loss for the period	(30,480)	(64,393)	(43,673)	(74,857)
Weighted average number of common shares (in thousand)	108,133	108,133	108,133	108,133
Basic and diluted loss per share (in Reais)	(0.2819)	(0.5955)	(0.4039)	(0.6923)

29. Insurance

On June 30, 2023, the Company and its subsidiaries have the following insurance contracts and amounts considered compatible by management with the risks involved:

- PP&E and inventory (approximate coverage – R$ 561,063)
- Civil liability: coverage for material and personal damages caused involuntarily to third parties as a result of the production, facilities and assemblies taking place on the insured site;
- Administrative (approximate coverage - R$ 449,145)
- Administrative head office: fire, lightning strike, explosion, theft, qualified theft, civil liability and others.

Given their nature and specific features, the risk assumptions made and the respective coverage are not covered by a quarterly statements audit, and were not therefore reviewed by our independent auditors.

Bernardo de Almeida Gradin CEO	Guilherme Mottin Refinetti CFO	Dejair Adão Guerro de Oliveira Controller CRC PR-052741/O-4-T-CE