forico

future fibre

NATURAL CAPITAL REPORT EXTRACT 2020

of the Tasmanian Forest Trust
for the year ended 30 June 2020

Natural Capital

understanding the value of our dependencies and our impacts on the natural world

Forico's Purpose

We are the custodians of the natural environment and trusted to make the best use of natural resources for future generations.

Front Cover Image: Watercourse on Forico Estate – Irishtown, North West Tasmania

Pultenaea juniperina (prickly beauty)

forico
future fibre

Disclaimer over the preparation of the Natural Capital Report

The preparers of the Natural Capital Report acknowledge that Natural Capital markets are underdeveloped and will most likely evolve rapidly over the coming years and as such this Natural Capital Report presents our current estimates of our business' impact and dependencies on the environment. We have needed to apply pragmatism and feasibility to provide a basic level of understanding to the complex and evolving field, and due to its nature, uncertainty and challenges exist in quantifying Natural Capital assets accurately and consistently.

Readers should refer to the Trust's Annual Financial Report or related publications for any financial information and caution should be applied whilst interpreting the assessments in this Natural Capital Report as they in no way reflect or have any impact on the Estate's past, present or future financial performance. In particular, the metrics presented in this report do not create any liabilities, implied costs or any rights to offset any amounts contained therein, nor do they trigger any provisions or result in any off balance sheet commitments.

This report contains forward-looking statements about Forico Pty Limited's (Forico) operations and was prepared based on information available at the time of writing. We do not undertake to update or revise these forward-looking statements after the date of this report. Some assumptions may not materialise due to unanticipated events and circumstances which may ultimately affect the actual results. Projections are inherently subject to substantial and numerous uncertainties and therefore, the actual results may vary significantly from the forecasts and the variations may be material.

Forico makes no express or implied warranty or representation in relation to any information or data contained in the Natural Capital Report. Therefore, none of Forico or its representatives will have any liability whatsoever in negligence or otherwise for any loss arising from any use of this document or any other information or material comprised or derived from our Natural Capital assessments.

We seek to continue to build on our knowledge of the services and benefits provided by the resources under our management and aim to use the best available methods and data in preparing our report.

If you would like more information around the methodologies applied in this report, please contact us at forico@forico.com.au.

TABLE OF CONTENTS

Not included

This is an extract of the full report.
Please contact our office if you would like further information about the full report.

ACKNOWLEDGEMENT OF COUNTRY

In pursuit of our common interest for reconciliation, Forico acknowledges and pays respect to the Tasmanian Aboriginal Palawa and Pakana peoples as the Traditional Owners and spiritual custodians of the land on which we do business. We acknowledge the Palawa and Pakana Elders – past, present and emerging.

We are future fibre.

Sustainability forms the foundation of our business...

We prioritise safety, social, environmental and economic principles and this is recognised through being certified to the Responsible Wood and Forest Stewardship Council® Certification Schemes.

Eucalyptus nitens (shining gum)

NATURAL CAPITAL REPORT 2020

of the Tasmanian Forest Trust
for the year ended 30 June 2020

"Here at the intersection of climate change solutions, sustainable materials, and the rising flow of investment funds into the forestry asset class, we find an important opportunity. It may be that the concept of a "timberland" asset class is too limiting, and we need to think more holistically about forests and their role in a spectrum of ecological services like climate mitigation, watershed protection, and biodiversity conservation, as well as a source of renewable, recyclable and decomposable materials.[1]"

David Brand, Chief Executive Officer,
New Forests Asset Management

1 New Forest 2018 Sustainability Report, <https://newforests.com.au/wp-content/uploads/2019/04/NEW-FORESTS-2018-Sustainability-Report-web.pdf>

Message from OUR CEO

This Natural Capital Report has been prepared to showcase the progress Forico has made over the last 6 years in demonstrating a compelling story for sustainable forestry in Tasmania and our contribution to the wider community.

You will see that the significance of the values presented have transformed our thinking about the wealth of nature and our business' impacts on and dependencies from nature. This Report's goal is to change the conversation about value and to emphasis our purpose to create, share and protect value for both our business and for society.

By integrating Natural Capital Accounting into our business, Forico and our stakeholders can form a more comprehensive picture of our Corporate Sustainability performance, future value proposition and the risks and opportunities from our use of non-renewable and renewable resources to achieve our strategic objectives.

This year's Natural Capital value has been conservatively estimated at $3.3 billion, but using alternative valuation metrics this figure could easily be as high as $10 billion – which is still incomplete as we know it excludes many important ecosystem services which we hope to measure, value and include in future years.

Our Report aims to be open about our operations and to promote the great work that Forico has achieved to date and which we intend to continue to do so into the future.

Let us share our long-term value creation and preservation story with you.

Bryan Hayes, Chief Executive Officer,
Forico Pty Limited

KEY MESSAGES 2020

forico
future fibre

Results from our first Natural Capital Report show a positive contribution to the environment in which we operate from our sustainably managed plantation and natural forest resources.

Assigning a financial value to the importance of habitat, vegetation and biodiversity is evolving fast, and leading governmental offset schemes would **value our natural forest areas at more than $5 billion!**

Net Contribution to
Natural Capital
in FY20
$158.6 million
$40.6 million
negative impact from Operations. Offset by
$199 million
positive net contribution to Society.

Net Natural Capital Value
$3.37 billion.
$400 million to Business
and
$2.97 billion to Society.

Sequestering over
124 million tonnes of CO_2-e
from the atmosphere with a further 57 million tonnes expected to be sequested by the Standing Plantation Estate before harvest.

Alternative valuation metrics suggest the true social cost of carbon could be as high as $61 per tonne of CO_2-e which would value the carbon sequested on the Estate at more than $7.6 billion.

Emissions impact from our operations
28.8 kilotonnes CO_2-e
valued at **$460k.**

Our total forest management area of
172,328 hectares
represents
3 percent of Tasmanian water catchments.

10.9 million Green Metric Tonnes (GMT) of standing timber in our plantations.

21,741 hectares of riparian corridors
are protected within our catchments, with over
4,500 kilometres of streamside reserves
which have **prevented 2,420 tonnes of erosion**
from our operations.

Our
76,830 hectares
of natural habitat areas
have been independently assessed as being
relatively unmodified in condition.

About this Report

The Forico Purpose states:

"We are the custodians of the natural environment and trusted to make the best use of natural resources for future generations"

We strive to improve our positive contribution to our business and society, while minimising the negative effects of our business activities on the environment and the communities in which we operate.

This report is the cumulation of our efforts to date to identify, quantify and demonstrate our reliance on and contribution to the environment, and as such Forico is excited to share our first Natural Capital Report.

This Report aims to communicate our impact and dependencies on the environment by integrating their true value into a traditional financial reporting framework. Our first report is illustrative of what we believe are the fundamental ecosystem services used and generated by the Tasmanian Forest Trust (the Estate) and their associated costs and benefits that form a part of our holistic value chain. This inaugural report is our attempt to go beyond established qualitative and quantitative assessments to value and disclose the financial and non-financial externalities of our business activities on society in a common monetary language – the dollar.

We have utilised a range of traditional valuation mechanisms as well as explored other non-market methods that best characterise the full economic extent, condition and value of our Natural Capital. By demonstrating certain material business dependencies and impacts in this report, we seek to convey the wider benefits obtained from the ecosystems in which we operate.

We have designed our approach to be a pragmatic, scalable, transferrable and auditable application of credible methodologies. We share our journey here in this document with external parties and stakeholders to contribute to the continued evolution and standardisation of natural capital accounting. However, this report is not intended to be a detailed technical discussion of our approach, and readers with a technical or academic background may wish to contact us for further information.

We recognise that this is an evolving field but we feel that we have reached a maturity at which our outputs to date could be provided to a wider audience to inform decision making, improve the transparency of communications, evaluate performance and monitor progress, bearing in mind the limitation of scope and disclaimers outlined in this Natural Capital Report.

Nothofagus cunninghamii (myrtle beech)

Natural Capital Accounting

is recording our transactions with nature

NATURAL ASSETS FROM OUR ENVIRONMENT

From the earth, land, soil, water, air, trees, wildlife. Provided by the environment.

MEASUREMENT OF IMPACTS ON OUR ENVIRONMENT

A business's impact based on their transactions with nature by measuring and reporting outcomes.

NATURAL CAPITAL ACCOUNTING

The revenue streams from habitat restoration and improving and creating long term investment in our environment.

What Is Natural Capital Accounting?

Natural Capital is defined as the stocks of natural assets created from living organisms which are present in the environment such as soil, water, air and trees[2]. From these natural assets, humans utilise a wide range of ecosystem services that are visible and tangible, such as timber from trees or water extracted for urban consumption. But there are also ecosystem services that are not as visible, as yet, however they still perform vital functions such as purifying air, water filtration and cycling nutrients in organic matter.

Nature supports human health, livelihoods and economies in countless ways. The world's population relies on a resilient Natural Capital, but despite its importance it has not always factored into business and investment decision-making, often because practical, credible information is lacking or inaccessible. As these ecosystems have not traditionally been monetised they are seen as 'free' and consequently at risk of being overexploited.

Natural Capital Accounting is the measurement of an organisation's impact and dependencies on these natural capital assets. It allows us to communicate through traditional accounting methods our sustainable management systems and to develop long term plans to benefit both our business and society.

2 Natural Capital Coalition, What is Natural Capital?, <https://naturalcapitalcoalition.org/natural-capital-2/>.

Our Natural Capital Accounting Journey

Forico's journey with Natural Capital Accounting started in 2014, when Forico commenced its Natural Forest Assessment Program and has evolved through the engagement of consultancy services to provide theoretical proof of concepts regarding Natural Capital with our own internal teams measuring and spatially mapping our Natural Capital incorporating extensive field research conducted by specialists such as ecologists, botanists and sustainability consultants to understand the extent and condition of our ecosystem services.

Since Forico's inception in September 2014, the company and its investors have devoted significant time and resources to research, innovation and operational efficiency projects to proactively manage the natural resources for future generations. This ambition has led to our exploration into the field of Natural Capital Accounting to reconcile financial and environmental interests.

These records and findings form our 2020 Natural Capital Report and have informed the monetisation of these services to measure and communicate Natural Capital assets and flows in this Report.

Figure 1 – Forico's Natural Capital Journey

2021
2nd Carbon Project success at ERF auction
Natural Capital scope expanded & refined
Promote, communicate & market NCR

2020
Natural Capital Reporting Framework developed
Elements of the first set of NC accounts subject to limited assurance @30 June 2020
First ERF Abatement Certificate Received
2nd Carbon Project Registered with ERF

2019
Sustainability Snapshot 2019 released
Forico wins Tasmanian award for;
Environmental Excellence
Forest Growing Management Excellence

2018
HCV grassland restoration project commenced – Surrey Hills
Sustainability Snapshot 2018 released
Forico presented the NCA Surrey Hills Case Study with IDEEA Group at Natural Capital Week 2018 in Paris

2017
Forico enters carbon market
First Australian plantation company to succeed through ERF

2016
IDEEA Group Consultants engaged for Feasibility Assessment

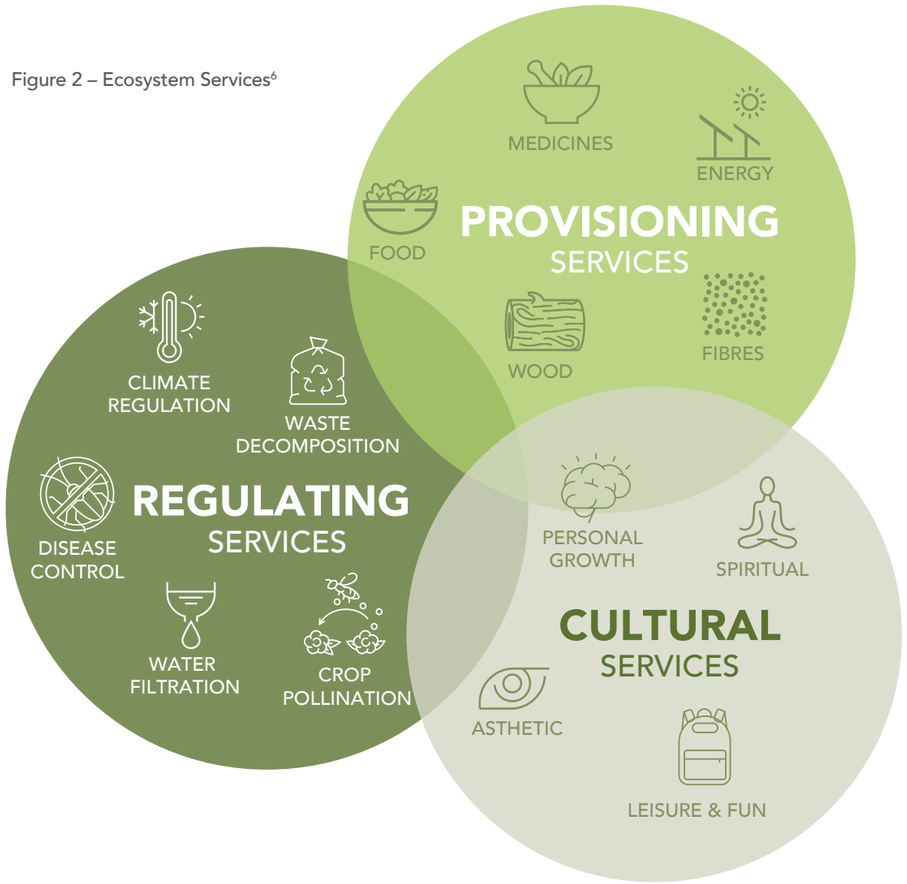
2015
FSC Management Certification to complement Responsible Wood Certification

2014
Forico inception – September 2014
Natural Forest Assessment Program commenced

Our Approach

There have been several valuable contributions from different organisations that have sought to develop a standardised framework to quantify and report on natural capital elements. Forico began its Natural Capital journey utilising the United Nations[4] System of Environmental Economic Accounting (SEEA), to develop a structured, systematic approach and methodology to determine the extent and condition of the natural values that we manage. In order to encapsulate and incorporate these values within the financial accounts, Forico has expanded on this foundational work by adopting a more commercial approach outlined under the National Capital Protocol (NCP)[5]. The creation of this Natural Capital Report has been a collaborative effort, galvanising the skills and knowledge of a multi-disciplinary team of accountants and sustainability experts aligning their language to communicate long-term value creation and preservation.

Figure 2 – Ecosystem Services[6]



4 United Nations, System of Environmental Economic Accounting, <https://seea.un.org/>.
5 Natural Capital Coalition (2016): Natural Capital Protocol, <https://naturalcapitalcoalition.org/natural-capital-protocol/>
6 William E Eubanks, Green and Growing, What are ecosystem services and why they are crucial to our survival, (2016) <https://www.greenandgrowing.org/ecosystem-services-importance/>.

Our Business

Forico manages the largest privately held forest and land Estate in Tasmania, Australia on behalf of the investors of the Tasmanian Forest Trust.

The Tasmanian Forest Trust Estate ("The Estate") comprises of over 172,000 hectares of landscape in Tasmania. The Estate consists of almost 90,000 hectares of plantation managed for sustainable wood fibre production, and over 76,000 hectares of natural forest and other habitats managed for conservation and biodiversity values.

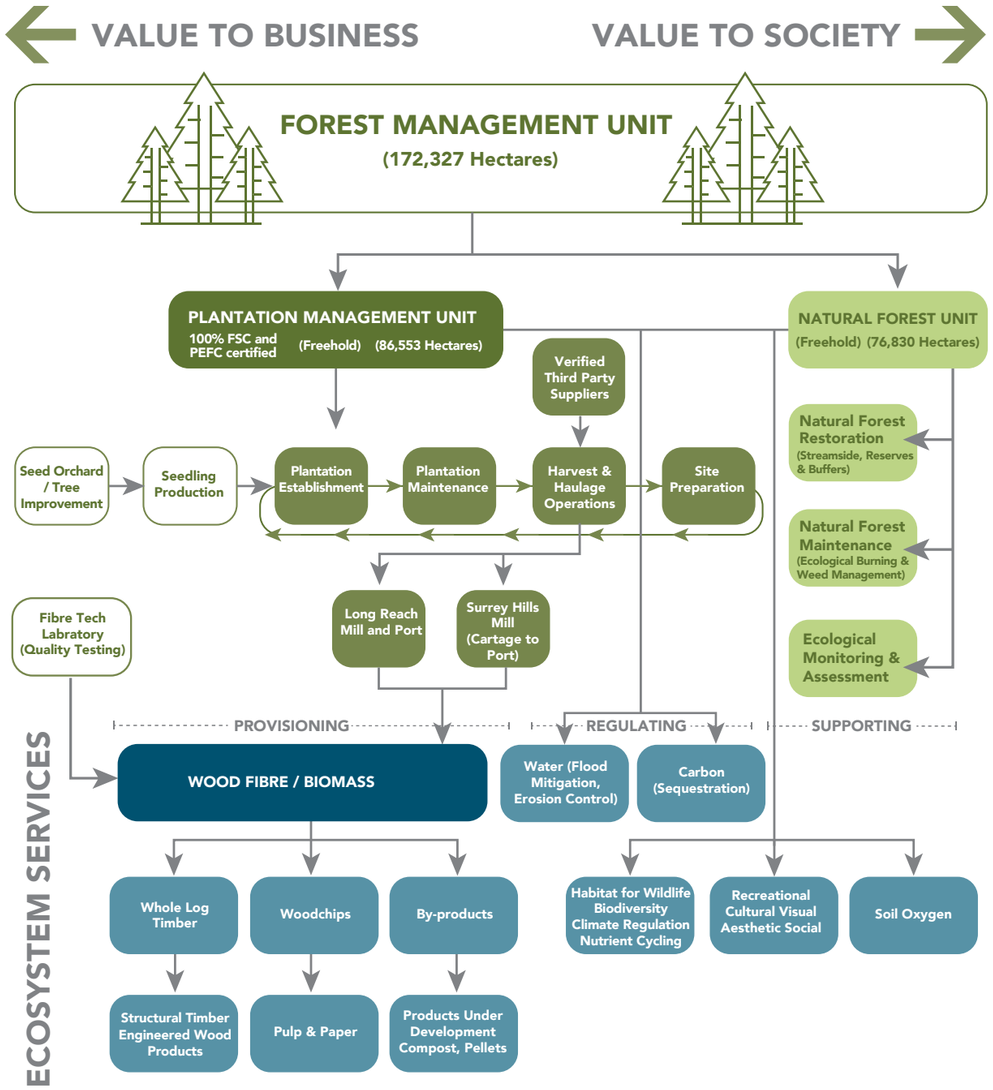
Forico adds value by managing the fully vertically integrated seed to market value chain for the Tasmanian Forest Trust, incorporating:

- A tree improvement program and nursery where we grow more than 6 million seedlings per annum;
- Plantation establishment activities where we cultivate the soil and plant our seedlings;
- Ongoing maintenance throughout the growing of our plantations;
- Harvesting and transportation of the plantation products to our mills or to market;
- Two processing facilities where we produce high quality wood fibre products for our customers; and
- A Fibre Technology laboratory where we test the quality of our plantation products.

Figure 3 – Location map of the Tasmanian Forest Trust

The value chain for the Tasmanian Forest Trust can be summarised conceptually in Figure 4 below, representing the context of Natural Capital within the Estate.

Figure 4 – Forico's Value Chain incorporating Natural Capital ecosystems services



Corporate Sustainability balances ...

Environmental Stewardship
Social well-being *and*
Economic prosperity

What we believe

We have a strong belief that forest products can make a positive contribution to the mitigation of climate change and the transition to a circular economy.

Certified, sustainably managed plantation wood fibre is one of the key solutions in an increasingly important bioeconomy to replace single-use plastics and carbon-intensive industries with a fully renewable resource. The majority of Forico's plantation wood fibre is currently sold to customers for pulp and paper production – specifically printing, writing, hygiene and packaging products. A proportion of the plantation logs are also sold to domestic customers to value-add and generate engineered wood products and to international customers to produce wood veneers such as plywood.

Fundamental to all our operations and strategic intent is to deliver **Corporate Sustainability**, which balances:

- **Environmental stewardship**
- **Social well-being; and**
- **Economic prosperity**

To further demonstrate our commitment to sustainability and continual improvement, we have achieved and maintained certified status under two globally recognised sustainable forest management certification schemes, namely,

1. **Forest Stewardship Council (FSC®) Certification Scheme; and the**
2. **Responsible Wood Certification Scheme that is endorsed through the global Programme for the Endorsement of Forest Certification Schemes (PEFC).**

Forico does not harvest any natural forests for commercial purposes, they are managed for their conservation and biodiversity values.

Our internal supply chain is also certified to the ISO 14001 Standard: Environmental Management Systems.

Forico's forest resource is geographically spread throughout Tasmania, predominantly located in northern Tasmania.

FSC www.fsc.org FSC® C104643 FSC® C125199

Responsible Wood RW/1-31-276

PEFC PEFC/21-31-276

employer of choice

work safe home safe

NATURAL CAPITAL REPORT

Framework

Recording our transactions with nature

Our Framework

THE NATURAL CAPITAL PROTOCOL

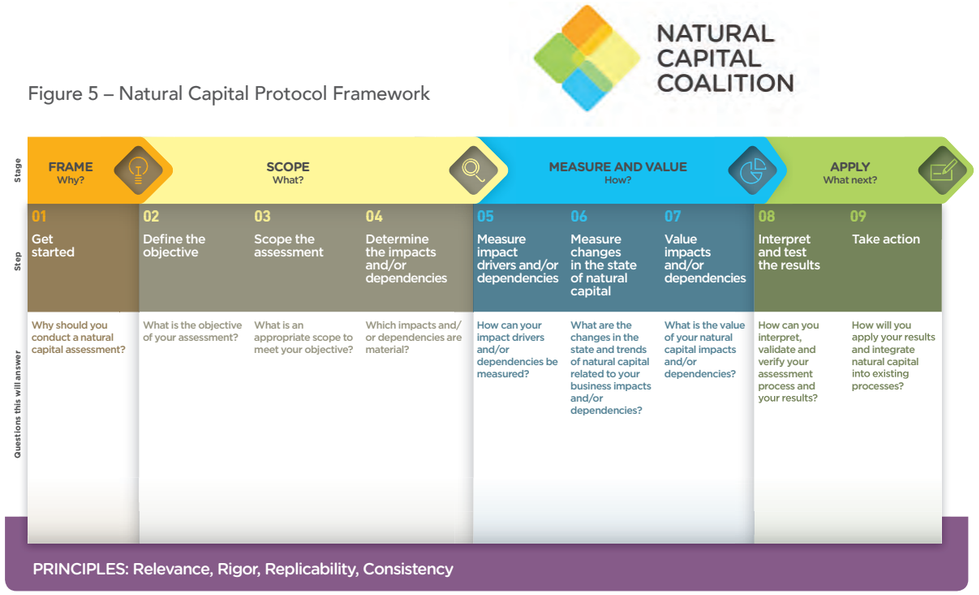
The Capitals Coalition (formerly the Natural Capitals Coalition) provides an approach that harmonises and integrates several natural capital guidelines and methodologies. The Natural Capital Protocol has been created in collaboration between researchers and members from the professions of science, accounting, reporting, standard setting, finance, policy, and government together with business, conservation, and civil society.

The Natural Capital Coalition brings together leading initiatives and organizations under a common vision of a world where business conserves and enhances the natural capital that safeguards thriving societies and prosperous economies.[7]

The development of this Protocol has focused on providing a principles-based framework aimed at the business decision-making level by embedding the capitals into business processes, strategies and reporting. The Protocol is an iterative process that involves collecting and analysing data and developing methods to support decisions made by businesses.
The interpretation and reporting of this data should be reflective of the goals of the business in understanding the true costs and values associated with the natural capital assets.

The Protocol Framework involves nine steps over the four stages: Frame, Scope, Measure and Value, and Apply. The different stages allow the user to

Figure 5 – Natural Capital Protocol Framework



7 Natural Capital Coalition, <https://naturalcapitalcoalition.org/coalition-organizations/>

tailor their approach and to make appropriate adjustments as they progress through each stage. The Protocol is not a stand-alone framework and does not attempt to prescribe a restrictive framework but rather to complement other Natural Capital tools such as the Global Reporting Initiative, International Integrated Reporting Council, SEEA and the Greenhouse Gas Protocol together under the umbrella of the Protocol's standardised framework, and connects them all together as processes for natural capital assessment.[8]

The Protocol Framework is further enhanced with the industry focussed Forest Products Sector Guide which considers the specific natural capital impacts and dependencies for forestry operations. This guide provided another tool to guide Forico's application of the Protocol Framework.[9]

Principles

The guiding principles provided under the Natural Capital Protocol ensures that the processes for data collection and analysis are fit for purpose and that the conditions applied in compiling the data are conducted using sound scientific and economic approaches. This ensures that the values extracted from the data are relatable, reliable, and based on sound methodologies.

We have applied the following quality criteria to our reporting approach, based on guidance provided in the Natural Capital Protocol[10] and GRI Sustainability Reporting Standards:[11]

- **ACCURACY** – Sufficiently accurate and detailed for users to assess Forico's performance related to certain environmental impacts and dependencies
- **RELEVANCE** – We have considered the most relevant issues, impacts and/or dependencies that are most material for our business and its stakeholders which have been identified in our Materiality Assessment (see Scope Stage on page 26).
- **BALANCE** – We have presented both positive and negative impacts on society to enable users to make a reasoned assessment of overall performance outlined within the Scope section of this report
- **TIMELINESS** – Methodologies, scope and processes will be reviewed, calculated and communicated on an annual basis and adjusted to reflect new information and leading best practices in this evolving field
- **CLARITY** – Presented in a manner that is understandable and accessible for all relevant stakeholders.
- **RELIABILITY** – Our approach collates, records, analyses and communicates information in a way that enables the information to be examined, challenged and verified by independent parties to provide users with confidence to its reliability
- **RIGOR** – We have used technically robust (from a scientific and economic perspective), fit-for-purpose and, where applicable, publicly available approaches.
- **REPLICABILITY** – We have endeavoured to ensure that all assumptions, data, caveats, and methods used are transparent, traceable, fully documented, and repeatable to allow for verification and assurance.
- **CONSISTENCY** – Data and methods we have used are compatible with each other and with the scope of Report.

While acknowledging the limitations outlined in the Disclaimer section of this report, we consider that our assessments of value will lead to results that are directionally illustrative and sufficiently sound for the purposes of:

- ✔ Communicating and reporting on demonstratable "real" impacts of our business activities on society;
- ✔ Monitoring our contribution to a sustainable future over time; and
- ✔ Providing complementary information for decision making processes.

8 The Natural Capital Protocol Toolkit, <https://naturalcapitalcoalition.org/protocol-toolkit/>
9 Natural Capital Coalition, 2018, Natural Capital Protocol - Forest Products Sector Guide, https://naturalcapitalcoalition.org/wp-content/uploads/2018/07/NCC_ForestProductsSectorGuide_Web.pdf
10 Natural Capital Coalition (2016): Natural Capital Protocol, p6 https://naturalcapitalcoalition.org/natural-capital-protocol/
11 Global Reporting Initiative (2018): consolidated Set of GRI sustainability Reporting standards 2018, p7-16

FRAME STAGE
Why?

Since Forico's inception it has been our mission to sustainably manage our natural assets as custodians of the natural environment. We have developed this Natural Capital Report in order to fully understand the broader range of services that emanate from the environment and communicate this to our stakeholders.

Transparency is the core of responsible business practice and we see Natural Capital Accounting as an extension and improvement to our current reporting framework.

In producing this Natural Capital Report we aim to:

- ✔ Show how both productive plantation forests and native forests through proactive landscape management can generate long-term sustainable growth;
- ✔ Present our significant net positive value to Society and to our stakeholders;
- ✔ Conceptualise a more macro-societal perspective for our business decision-making by providing a balanced framework to consider all six types of capital: Financial, Manufactured, Intellectual, Human, Natural and Social;
- ✔ Better understand the economic, social and environmental impact of our activities and their dependencies along our value chains;
- ✔ Make our impacts on society more tangible and comparable by measuring them in monetary terms;
- ✔ Share our approach, experiences and learnings with our stakeholders, industry collegues and other standard setting communities;

and ultimately to:

- ✔ Improve the story telling about our value proposition to our stakeholders including investors, policy makers and to the wider community to strengthen our social licence to operate.

Acacia mucronata (caterpillar wattle)

SCOPE STAGE
What?

Scope of our first Natural Capital Report

In our first Natural Capital Report we have focused on the following ecosystem services which we have determined to be among the most material to our present-day business and industry:

- **PROVISIONING – WOOD FIBRE** from sustainable plantations to be converted to sawlogs and wood fibre products;
- **PROVISIONING AND REGULATING – CARBON** sequestration by our plantation and natural forests offset by carbon emissions produced by our operations;
- **PROVISIONING AND REGULATING – WATER** usage and impact on both high and low downstream flows, and water quality impacts principally regarding our natural forest riparian corridors utilised to control erosion and sediment release within our managed estate; and
- **PROVISIONING AND REGULATING** – custodianship of natural forest and other **HABITAT** areas for the identification, protection, restoration and maintenance of environmentally important vegetation communities which are integral for biodiversity and functioning ecosystems.

Forests provide a range of provisioning, regulating and cultural services beyond the scope of what we have chosen to report on in 2020. As Natural Capital is an evolving concept, we are currently limited in the availability of mature market data. As we work to expand our data, accounting standards develop and markets value the broader range of services provided by forests, we intend to include more of these services to present a more comprehensive picture.

For example, in this first iteration of the Estate's Natural Capital Report, we have not included an assessment of Climate Change related impacts and dependencies. We are, however, at present undertaking several risk assessments and scenario modelling and acknowledge that Climate Change is a material and significant challenge and opportunity for our business, industry and the wider community. It is our intention to integrate the findings from these projects into future Natural Capital Reports.

WOOD FIBRE

CARBON

WATER

HABITAT

Eucalyptus viminalis (white gum)

Materiality assessment of impacts and dependencies

Consistent with The Protocol's[12] Framework (specifically Stage 4), we conducted a materiality assessment of the natural capital impacts and dependencies by identifying the areas that are, or potentially could be, material to the business and would therefore be a consideration for our natural capital assessment. As defined by The Protocol

"an impact or dependency on natural capital is material if consideration of its value, as part of the set of information used for decision making, has the potential to alter that decision".[13]

Once the material natural capital impacts and dependencies were identified with guidance from the Forest Products Sector Guide compiled by the Natural Capital Protocol, we assigned assessment criteria to summarise these impacts as either significant, somewhat significant or unlikely to be significant in the context of our current plantation and natural forest Estate and the wider community. The scope of the Natural Capital Report has been defined after the materiality assessment of each of these impact drivers with focus attributed to the most material impacts for disclosure in this first Natural Capital Report.

While the materiality assessment does not necessarily consider the potential impacts across the entire value chain, especially downstream dependencies and impacts, due to insufficient available data at this point in time, the following materiality matrix provides an overview of Forico's potential Natural Capital impacts and dependencies as we currently understand them:

12 Natural Capital Coalition, Natural Capital Protocol - Forest Products Sector Guide, 34.
13 Natural Capital Coalition, Natural Capital Protocol, 43.

Leptecophylla pogonocalyx subsp. pogonocalyx (hairy bellflower pinkberry)

Table 1 – Value chain impacts and dependencies materiality assessment

DRIVER CATEGORY		DRIVER	FOREST TYPE		MATERIALITY ASSESSMENT	ASSESSED IN FY20
			NATURAL FOREST	PLANTATION		
IMPACTS						
Outputs		Carbon sequestration	✔	✔		Yes
		GHG emissions	✘	✔		Yes
		Non-GHG emissions	✘	✔		
		Water pollutants	✘	✔		
		Soil pollutants	✘	✔		
		Solid waste	✘	✔		
		Disturbance (noise & odour)	✘	✔		
Resource Use	Provisioning	Biomass for Timber	✘	✔		Yes
		Biomass for Fibre	✘	✔		Yes
		Cultivation of Food	✔	✔		
		Biochemicals, natural medicines & pharmaceuticals	✘	✘		
		Habitat for animals and plants	✔	✔		Yes
	Regulating	Water filtration, purification and waste treatment (groundwater)	✔	✔		
		Water filtration, purification and waste treatment (surface water)	✘	✘		
		Water use (groundwater)	✔	✔		
		Water use (surface water)	✔	✔		Yes
		Regulation of water timing and flows (groundwater)	✔	✔		
		Regulation of water timing and flows (surface water)	✔	✔		Yes
		Regulation of local, regional, and/or global climate	✔	✔		
		Regulation of air quality	✔	✔		
		Pest and disease control	✔	✔		
		Pollination	✔	✔		
		Soil erosion control	✔	✔		Yes
		Regulation of soil quality	✔	✔		
		Regulation of Natural Hazards	✔	✔		
	Cultural	Recreational & physical health	✔	✘		
		Tourism	✔	✘		
		Aesthetic appreciation	✔	✔		
		Spiritual experience	✔	✘		
		Education	✔	✔		
		Research	✔	✔		
		Cultural heritage	✔	✔		
DEPENDENCIES						
Consumptive		Energy	✔	✔		Yes
		Water	✔	✔		Yes
		Nutrition	✔	✔		
		Materials (Fibre)	✔	✔		Yes
		Land use	✔	✔		Yes
		Regulation of physical environment (e.g. ecosystem providing water filtration)	✔	✔		Yes
Non-Consumptive		Regulation of biological environment (e.g. resilience against disease)	✔	✔		
		Regulation of waste and emissions (e.g. pollution assimilation by ecosystem)	✔	✔		

Likely to be significant Potential to be significant Unlikely to be significant or not applicable
✔/✘ refers to whether the forest management practice is typically associated with each forest type.[14]

14 Natural Capital Coalition, Natural Capital Protocol - Forest Products Sector Guide, 42-43.

MEASURE AND VALUE STAGE
How?

The preparers of this Natural Capital Report acknowledge Natural Capital Accounting is an emerging field and whilst much productive and constructive progress has been made by several global and Australian organisations and individuals, a standardised framework and valuation methodology has yet to emerge. To this extent the measurement methodologies and key assumptions applied to determine the Natural Capital values are outlined in the report.

It is intended that over time, as natural capital accounting standards develop, so too will our natural capital accounts.

With this in mind, we have implemented a traffic light system which reflects our confidence in each of the monetised metrics within the accounts. It is intended that this confidence assessment can be updated on an annual basis as the Natural Capital field evolves and more Natural Capital data is collated and analysed:

Table 2 – Confidence Assessment criteria

LEVEL OF CONFIDENCE	DESCRIPTION OF CONFIDENCE
High	Value is based on publicly available methodology and we have a high level of confidence that measurement methodology is rigorous and robust.
Medium	Measurement approaches are emerging, and we have made assumptions and applied estimations. Our level of confidence in the measurement methodologies applied is medium and we believe the quantifications are based on the best available information.
Low	Measurement approaches are emerging and our level of confidence in the results is low. Results may be materially inaccurate. Available evidence is partial and significant assumptions have had to be applied. Results are exploratory and directionally demonstrable.

These measurement methodologies and confidence scores are intended to guide users of this Natural Capital Report by providing context to make their own assessment as to the materiality and rigor of the qualitative and quantitative figures disclosed.

Table 3 – Summary of applied ecosystem service measurement and methodologies.

NC SERVICE TYPE	THEMATIC ACCOUNT	METRIC	VALUE $	METHODOLOGY BASIS
Provisioning	Woodfibre	Green Metric Tonnes (GMT)	Yes	Modelling & Monitoring using Tigermoth software[15], Inventory validation per AASB141 – Agriculture[16] Independent valuer , A Standard for Valuing Commercial Forests in Australia – Version 2.1
Regulating	Carbon Sequestration – Plantation & Natural Forest	Tonnes of greenhouse gas emissions (t CO_2-e)	Yes	FullCAM (Ver 2020)[17] calibrated to Forico biomass yield modelling
Regulating	Carbon Emissions – Operations	t CO_2-e	Yes	National Greenhouse Energy Reporting (NGER) Act 2007[18]
Regulating	Carbon Sequestration – Social Cost	t CO_2-e	No	Social cost per t CO_2-e as determined by U.S. Environmental Protection Agency[19]
Regulating	Water Use and Flows	Gigalitres (GL)	Yes	Hydrological model developed based on Revised Universal Soil Loss Equation (RUSLE), TasLUcas[20] and IHACRES[21]
Regulating	Sediment Transport	Tonnes (t)	Yes	RUSLE, Department of Primary Industries, Parks, Water & Environment (DPIPWE)[22], Scientific Information for Landholders (SILO)[23] dataset
Provisioning	Habitat/Vegetation Condition	Vegetation Condition Assessment Score (VCA) Hectares (ha)	Yes	Review of Market value of current conservation offset and protection schemes weighted by Independent TasVeg Vegetation Condition Assessments

In her book, Six Capitals[24], Jane Gleeson-White quotes Robert K Elliot, who argued in 1992 that each new wave of wealth creation – agricultural, industrial and information – required a new form of accounting. At the time he was referring to the dot. com era where decision makers and standard setters needed to acknowledge that much of the value in emerging companies was not being disclosed on their traditional balance sheets. This gave rise to the idea of recognising intangible assets such as intellectual property, brands and trademarks. Twenty years later, in 2012, in response to greater demand for sustainability reporting and looming ecological crises, the United Nations adopted a new international standard to give Natural Capital equal status to the GDP: the SEEA.

Whilst SEEA was developed with the intention to enable economists to measure ecosystem flows and stocks with a variety of quantitative data such as hectares of habitat, litres of water and tonnes of carbon for governmental National Accounts, Forico has been an early pioneer in applying this framework at a corporate level. This Natural Capital Report aims to further this work by now applying the Natural Capital Protocol in conjunction with existing and emerging financial reporting frameworks to monetise and present Natural Capital assets, liabilities and flows in a way which is more familiar, consistent and comparable with existing International Financial Reporting frameworks and standards.

15 Tigermoth, https://www.tigermoth.com/
16 Australian Accounting Standards Board, AASB 141 Agriculture, https://www.aasb.gov.au/admin/file/content105/c9/AASB141_08-15.pdf
17 The Full Carbon Accounting Model (FullCAM), September 2020, https://www.industry.gov.au/data-and-publications/full-carbon-accounting-model-fullcam
18 National Greenhouse and Energy Reporting Act 2007, https://www.legislation.gov.au/Series/C2007A00175
19 United States Environmental Protection Agency, The Social Cost of Carbon, <https://19january2017snapshot.epa.gov/climatechange/social-cost-carbon_.html>
20 Brown, A.E., Hairsine, P.B and Freebairn, A. (2006). The development of the Tasmanian Land Use Change and Stream Flow (TasLUCaS tool, CSIRO Land and Water Science Report 54/06, National Heritage Trust, July 2006.
21 Croke, B.F.W., Andrews, F., Spate, J. and Cuddy, S.M. (2005). IHACRES User Guide. Technical Report 2005/19. Second Edition. iCAM, School of Resources, Environment and Society, The Australian National University, Canberra, < http://www.toolkit.net.au/ihacres>
22 Department of Primary Industries, Parks, Water and Environment, The Conservation of Freshwater Ecosystem Values (CFEV) Program, <https://dpipwe.tas.gov.au/water/water-monitoring-and-assessment/cfev-program>.
23 Queensland Government, SILO (Scientific Information for Landholders) Australian climate data from 1889 to yesterday, <https://www.longpaddock.qld.gov.au/silo/>
24 Six Capitals, 2020, Jane Gleeson-White, p1

Integrated Reporting

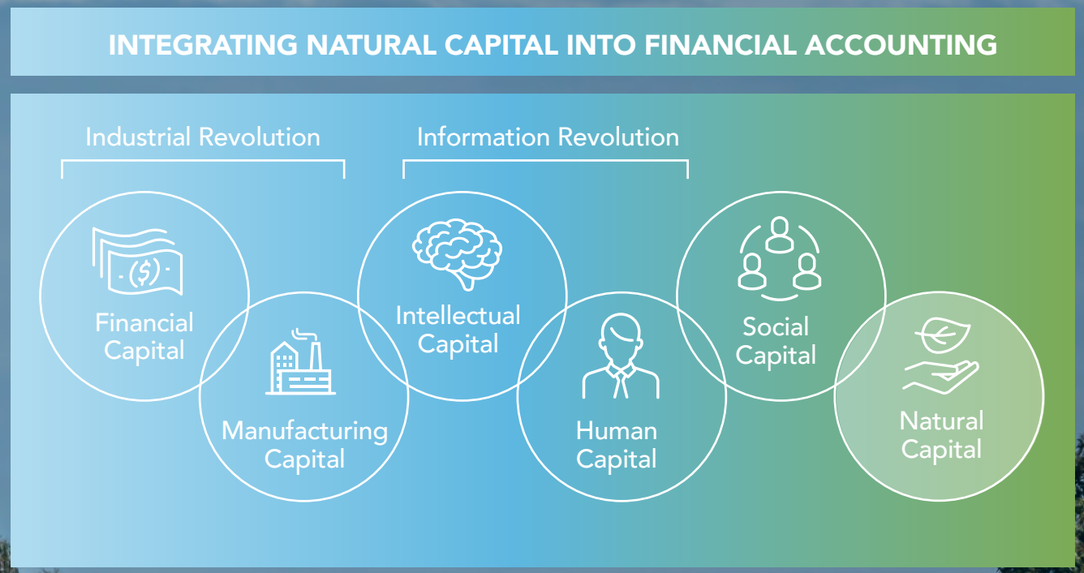
The Capitals Coalition launched a report in April 2020 exploring four possible but different methodologies for furthering Natural Capital value disclosures within the financial accounting practice[25], namely:

METHOD 1 – Recognition of Intangible Assets under Accounting Standard AASB 38 – Intangible Assets: Treating some investments to enhance natural and human capital as an "intangible asset" under existing accounting standards (International Accounting Standard 38)

METHOD 2 – Value Added Statement of Nature: reshaping the income statement to show how much of the value generated by companies is "given back" to nature.

METHOD 3 – Comprehensive Accounting in Respect to Ecology (CARE) Model: Including new types of liabilities and assets that reflect debts to (because of inputs from) natural and social capital stocks.

METHOD 4 – Integrating Natural Capital into Financial Accounting: Integration of financial and natural capital into a single income statement and balance sheet.



Evolution or Revolution?

25 Capitals Coalition, Improving nature's visibility in financial accounting- Full report April 2020, <https://naturalcapitalcoalition.org/wp-content/uploads/2020/04/NatCap_VisFinAccount_final_20200428.pdf>

The diagram below presents how each of these emerging methods relate to the existing Financial Reporting Framework and Standards:

Forico has chosen to focus on Method 4, as we believe that this Integrated method will best meet Forico's goals for Natural Capital Accounting and the requirements of our users. The benefits of this method include:

- ✔ Showing the financial and non-financial values in one single statement, focusing on material impacts and dependencies using the common metric of monetary units;
- ✔ Enabling long term time horizons to be considered;
- ✔ Distinguishing between the value to business and value to society, allowing users to consider each aspect separately or in combination;
- ✔ Allowing for the assessment of both the impacts and dependencies to natural capital;
- ✔ Valuation methods enabling both market and non-market values;
- ✔ Presenting the Estate's "true value" by including Natural Capital Assets not traditionally disclosed in existing Balance Sheets;
- ✔ This method is best suited for organisations with spatial management responsibility, such as landscape managers like Forico;
- ✔ Easy to read and relatable for users familiar with existing Financial Reporting Standards and reporting formats; and
- ✔ Ability to be consolidated into existing Financial Reports with any double counting eliminated per existing accounting practices.

Figure 6 – Natural Capital Coalition Framework Integration into Financial Reporting

APPLY STAGE
What next?

Our next steps in the Natural Capital journey will be for further development and investment in Natural Capital Accounting.

We will focus on other Natural Capital stocks and flows not measured or valued to date such as air filtration, cultural services, soil carbon and threatened species.

Cultural services, specifically those relating to Aboriginal community engagement will be a particularly interesting advancement when developing Forico's Social Capital Accounts in future years.

The Integrated Reporting <IR>[26] Framework is an intuitive extension of this inaugural Natural Capital Report. The goal of applying the <IR> framework will be to communicate a more transparent and comprehensive picture of all six capitals with integrated thinking, to tell our complete value story and communicate our strategy through the six capitals.

<IR> is consistent with numerous developments in best practice corporate reporting taking place across the world and the <IR> framework provides a principles-based guidance for companies and other organisations wanting to prepare an <IR> to replace numerous disconnected and static communications with stakeholders.

By addressing all the capitals we can report not just our past performance, but we can demonstrate our future-focussed strategy that demonstrates our commitment to long-term sustainability. <IR> will facilitate an efficient integration of our information systems and reporting platforms that support both internal and external reporting and communication, including the preparation of an Annual Integrated Report. This will allow us to communicate how we can create value over time and demonstrate the integration of our business strategies with our governance and management systems.

Social and Cultural Services

Forico are committed to engage proactively with all stakeholders including social partnerships that advance research and education collaborations. All our operational activities protect identified cultural heritage areas for both Aboriginal and European sites. With specific reference to Aboriginal cultural heritage, whilst we comply with Forest Practices prescriptions, we are also developing relationships and investigating mutually beneficial opportunities with the Aboriginal community of Tasmania to collaborate at sites that may be Potential Areas of Sensitivity. We are currently in the process of developing a Reconciliation Action Plan with the Aboriginal community to advance these mutually beneficial opportunities.

Other areas of community interactions include provision of amenities for research, recreation, tourism and public events, whilst also controlling access to responsibly manage safety, health and environmental risks. This complements Forico's commitment to support the communities in which we operate.

26 The Integrated Reporting <IR> Framework, 2013, International Integrated Reporting Council (IIRC), <https://integratedreporting.org/resource/international-ir-framework/>

Reporting on Sustainable Development Goals

The United Nations Sustainable Development Goals[27] (SDGs), set the global blueprint to achieve a better and more sustainable future for the planet, through addressing the global challenges we currently face. The seventeen SDGs address social and economic development issues each with their own set of related targets. Alignment with the SDG's is part of Forico's strategic and future-focussed sustainable business model. In future Natural Capital Reports, we will seek align the SDG's relevant to TFT's and Forico's operations. For example, this may include:

SDG 8: Decent Work and Economic Growth

Sustainable economic growth will require societies to create the conditions that allow people to have quality jobs.

SDG 12: Responsible Consumption and Production

Is about doing more and better with less. It is also about decoupling economic growth from environmental degradation, increasing resource efficiency, and promoting sustainable lifestyles.

SDG 13: Climate Action

Climate change is a global challenge that affects everyone, everywhere.

SDG 15: Life on Land

Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss.

Figure 7 - Sustainable Development Goals "wedding cake"[28]

27 United Nations, Sustainable Development Goals,
28 Stockholm Resilience Centre, Stockholm University, 14 June 2016, <https://www.stockholmresilience.org/research/research-news/2016-06-14-how-food-connects-all-the-sdgs.html>.

Glossary of Terms & Acronyms

AASB	Australian Accounting Standards Board.
ACCU	Australian Carbon Credit Units – An ACCU is a unit issued by the Clean Energy Regulator. Each ACCU issued represents one tonne of carbon dioxide equivalent (tCO_2-e) stored or avoided by a project.[29]
ANU	Australian National University (Canberra).
ASIC	Australian Securities and Investment Commission.
AUD	Australian dollars.
Biodiversity	Includes diversity within and among species and ecosystems. Changes in biodiversity can influence the supply of ecosystem services.
CFEV	Conservation of Freshwater Ecosystem Values.
CRC	Cooperative Research Centre for Catchment Hydrology.
CSIRO	Commonwealth Scientific and Industrial Research Organisation.
DPIPWE	Department of Primary Industries, Parks, Water and Environment.
Ecosystems	Are living elements that interact with each other and their non-living environments and provide benefits or services to the world.
Ecosystem services	Are the benefits people obtain from ecosystems that make human life possible. These include provisioning services such as food, water and wood fibre; regulating services such as flood and disease control; cultural services such as spiritual, recreational and cultural; and supporting services such as nutrient cycling.
ERF	Emissions Reduction Fund is a voluntary scheme for carbon trading through the Clean Energy Regulator.
Evapotranspiration	Is the sum of evaporation and plant transpiration from the earth's land and ocean surface to the atmosphere.
FTE	Full-Time Equivalent.
FPA	Forest Practices Authority.
GDP	Gross Domestic Product.
GHG	Green House Gases.
GMT	Green Metric Tonnes is freshly cut timber with a 'green' moisture content. It is assumed to be the equivalent of 1000m3.
GRI	Global Reporting Initiative.
IBRA	Interim Biogeographic Regionalisation of Australia.
IHACRES	Identification of unit Hydrographs and Component flows from Rainfall, Evaporation and Streamflow data.
IPCC	Intergovernmental Panel on Climate Change.
KLS factor	Used to estimate sediment erosion (K x LS where K equals soil erodibility and LS refers to the length of the slope).
Natural Capital	Is all renewable and non-renewable environmental resources and processes that provide goods and services for the organization, including air, water, minerals, forests, biodiversity, and ecosystem health.
NCP	Natural Capital Protocol.
NGER	National Greenhouse Energy Reporting.
POA (Poaceae)	Native grass genus that is listed as extremely high priority for conservation[30].
Riparian zones	Refer to areas situated adjacent to wetlands or along the banks of rivers and water courses.
RUSLE	Revised Universal Soil Loss Equation.
SEEA	System of Environmental Economic Accounting.
SDG	United Nations Sustainable Development Goals – are a collection of 17 universal goals that aim to end poverty, protect the planet, and ensure all people enjoy peace and prosperity.
SILO	Database of Australian climate data from 1889 to the present.
TasLUCaS	Tasmanian Land Use Change and Stream Flow tool.
t CO_2-e	Tonnes of Carbon Dioxide equivalent.
TCFD	Task Force on Climate-related Financial Disclosures.
TLC	Tasmanian Land Conservancy.

29 http://www.cleanenergyregulator.gov.au/OSR/ANREU/types-of-emissions-units/australian-carbon-credit-units
30 https://dpipwe.tas.gov.au/conservation/threatened-species-and-communities

List of Figures

List of Tables

Acknowledgements

This document and the underlying metrics were researched and prepared by:

Rayne van den Berg
Chief Financial Officer, Forico Pty Limited

Simon Cook
Sustainability Manager, Forico Pty Limited

Ernst Kemmerer
Resource Information Manager, Forico Pty Limited

Cathie Bates
Environmental Accountant, Forico Pty Limited

Various people have contributed their time and expertise to develop this publication. The following are thanked for their contributions and support during our Natural Capital Reporting journey this year:

Forico	Board of Directors Staff and Management
New Forests Asset Management	Staff and Management
KPMG	Julia Bilyanska Lisa Crowley Carolin Leesha Georgie Aley
Woodlands Pacific	Geoff Manners
isNRM	Doctor Rebecca Kelly
Forest and Ecological Consultant	Kerri Spicer
Environmental Consulting Options Tasmania	Mark Wapstra
Tasmanian Land Conservancy	Leigh Walters
Walker Designs	Mia Barnett

Find out more

For more information about Tasmanian Forest Trust's Natural Capital Report and Forico's Natural Capital story please contact:

Email: forico@forico.com.au
Web: www.forico.com.au

forico
future fibre

Additional guidance documents

Adams Koshy, Julie Raynaud, Ece Ozdemiroglu & Allan Provins (2019) Natural Capital Statements: a case study on SCA, a Swedish paper and pulp company, Journal of Environmental Economics and Policy, 8:4, 394-412, https://www.tandfonline.com/doi/full/10.1080/21606544.2019.1635917

Capitals Coalition, Improving nature's visibility in financial accounting – Full Report April 2020, https://naturalcapitalcoalition.org/projects/improving-natures-visibility-in-financial-accounting/

Carbon Credits (Carbon Farming Initiative – Plantation Forestry) Methodology Determination 2017

https://www.legislation.gov.au/Details/F2017L01038

Dickie, I., Royle, D. & Neupauer, S. 2019, Testing a natural capital approach on SNH land. Scottish Natural Heritage Research Report No. 1144, https://www.nature.scot/sites/default/files/2019-12/Publication%202019%20-%20SNH%20Research%20Report%201144%20-%20Testing%20a%20natural%20capital%20approach%20on%20SNH%20land.pdf

Forestry England, Natural Capital Account 2018-19, https://www.forestryengland.uk/sites/default/files/documents/FE_NCA_18-19_FINAL.pdf

Forestry Commission England, Natural Capital Account 2017-18, https://www.forestryengland.uk/sites/default/files/documents/152-FCE-Natural-Capital-Account-FINAL-WEB.pdf

Johan Lammerant et al, Assessment of biodiversity measurement approaches for businesses and financial institutions, EU Business @ Biodiversity Platform, Update Report, 2, 6 December 2019, European Commission, https://ec.europa.eu/environment/biodiversity/business/assets/pdf/European_B@B_platform_report_biodiversity_assessment_2019_FINAL_5Dec2019.pdf

Natural Capital Coalition, Natural Capital Protocol, Forest Products Sector Guide, 2018, https://naturalcapitalcoalition.org/wp-content/uploads/2018/07/NCC_ForestProductsSectorGuide_Web.pdf

Scottish Government, Office of National Statistics, Scottish natural capital: ecosystem service accounts 2019, https://www.gov.scot/publications/scottish-natural-capital-ecosystem-service-accounts-2019/

The State of Victoria, Department of Environment, Land, Water and Planning, Ecosystem services from forests in Victoria – Assessment of Regional Forest Agreement regions, 2019, https://www.environment.vic.gov.au/__data/assets/pdf_file/0034/459574/Ecosystem-services-from-forests-in-Victoria-Assessment-of-Regional-Forest-Agreement-regions.pdf

United Nations, System of Environmental-Economic Accounting 2012 – Central Framework, New York, 2014, https://seea.un.org/sites/seea.un.org/files/seea_cf_final_en.pdf

Wentworth Group of Concerned Scientists, Accounting for Nature – a scientific method for constructing environmental asset condition accounts, 2016, Sydney, Australia, https://wentworthgroup.org/wp-content/uploads/2017/07/Wentworth-Group-2016-Accounting-for-Nature.pdf

forico
future fibre

Forico Pty Limited ABN 33 169 204 059
Phone +61 3 6335 5201 | Email forico@forico.com.au
16 Techno Park Drive, Kings Meadows, Tasmania 7250

forico.com.au