Geological Survey of Finland
Sustainability Report 2025

Solutions to Accelerate the Transition to Sustainable and Carbon Neutral World

GTK

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1. Director General’s review

Moving Forward with Courage

We live in a time when security, access to raw materials, self sufficiency, water availability, and adaptation to climate change have become strategic issues for nations. It matters greatly that the defence sector, the energy transition and the technology industry receive the raw materials they need, that clean water remains available, and that our living environment remains viable for generations to come.

As global supply chains falter and geopolitical tensions increase, the importance of up-to-date geological knowledge and expertise becomes even more pronounced. Societies are looking for solutions based on reliable information and long-term examination of natural resources – exactly what we at GTK have been doing for 140 years.

We respond to critical questions and research needs both in Finland and internationally. Last year, we launched new international projects related to raw materials and groundwater in Africa and Central Asia. We produced a record number of scientific publications and served over 250 customers around the world.

Advancing sustainability is an integral part of our work. Finland is at the forefront of sustainable industrial solutions, and GTK actively supports companies in reaching their sustainability objectives, for example in line with the steps outlined in Finland’s National Mineral Strategy. Through our work, we also open export opportunities for Finnish companies developing sustainable solutions.

Last year, we conducted a sustainability impact assessment, strengthening our understanding of where we generate the greatest positive impacts and where we must act more decisively to prevent negative impacts. We utilise the results to steer our sustainability actions in a direction more based on data and impact.

Despite all uncertainties, I encourage looking to the future with confidence. At GTK, we will continue our work grounded in open science and driven by sustainability, in cooperation with our customers and partners. The need for solutions is growing, and we stand ready to meet the challenge.

Kimmo Tiilikainen
Director General

Societies are looking for solutions based on reliable information and long-term examination of natural resources – exactly what we at GTK have been doing for 140 years.

2. Role of the Geological Survey of Finland

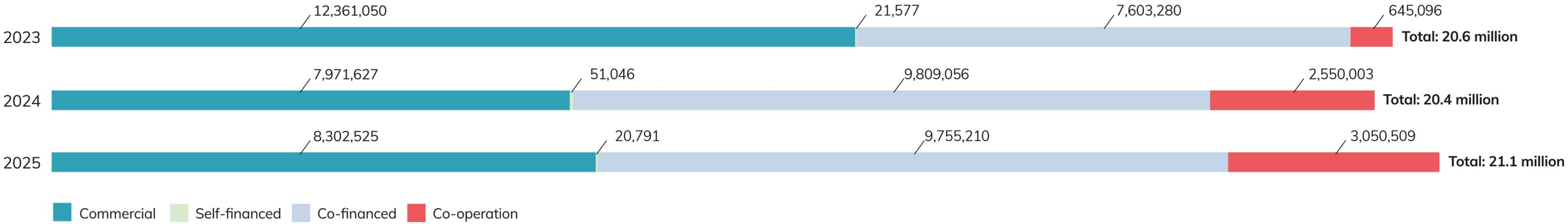
At Geological Survey of Finland GTK, we work for Earth and for Us. We conduct objective research to find solutions to challenges posed by climate change, the energy transition, and the circular economy. Our 400 experts are specialists in mineral economy, green energy, water management, the environment, and digital solutions. Together with our Finnish and global partners, we are building sustainable and carbon-neutral future. GTK is a research organization governed by the Finnish Ministry of Employment and the Economy.

The year 2025 was the second operational year of our strategy extending to 2027. GTK serves society and business by generating and refining applied research and knowledge, customer solutions, and innovations.

Among our key partners, universities and higher education institutions focus on basic research and education, while companies lead commercialisation and product development.

Our research and project activities fall into four categories: self-financed, co-financed, co-operation, and commercial projects. Self-financed projects are conducted with government budget funding. Co-financed projects are carried out jointly with partners and funded by such institutions as the Research Council of Finland, Business Finland, or the European Union. Co-operation projects are implemented partly with external funding from, for example, other public sector organisations.

Project portfolio 2023–2025 (EUR)



Commercial projects are delivered to Finnish and international customers. Our commercial activities focus on market sectors where GTK's expertise is in demand, for example the mining industry, water and environmental management, the energy sector, metal and chemical industries, and construction and engineering geology.

In 2025, we had a total of 318 projects ongoing.

GTK personnel in numbers

Employee job satisfaction

HenkilöstöBaro personnel survey 2025. The results are not comparable with previous years due to the renewal of the survey.

Overall satisfaction

3.20 Good level: 2.90–3.24 (scale 1–4)

Willingness to recommend

37 eNPS, good level: +10 to +49

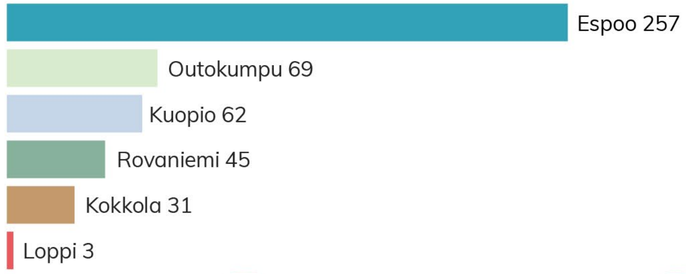
Work capacity score

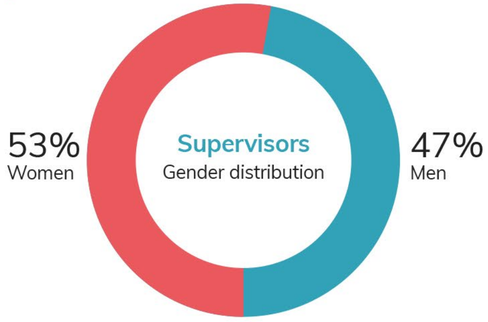
8.19 8.19 Good level: 8–9 (scale 0–10)

Share of international personnel

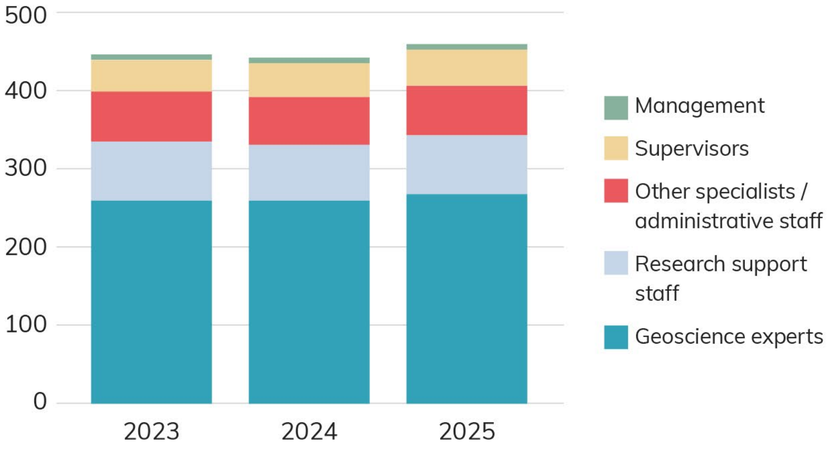
Recruitments 2025

Personnel by location

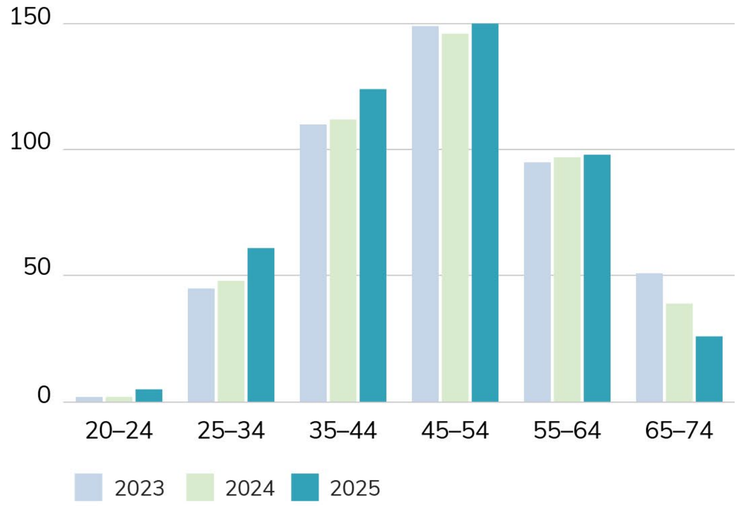




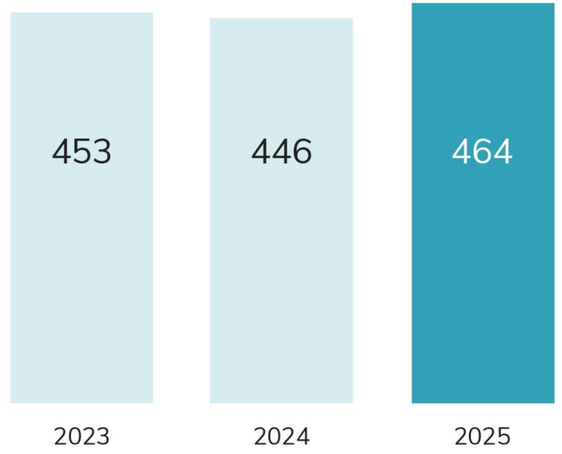
Personnel groups 2023–2025



Age distribution of personnel 2023–2025



Number of personnel 2023–2025



2.1 Balanced economy and sustainable growth

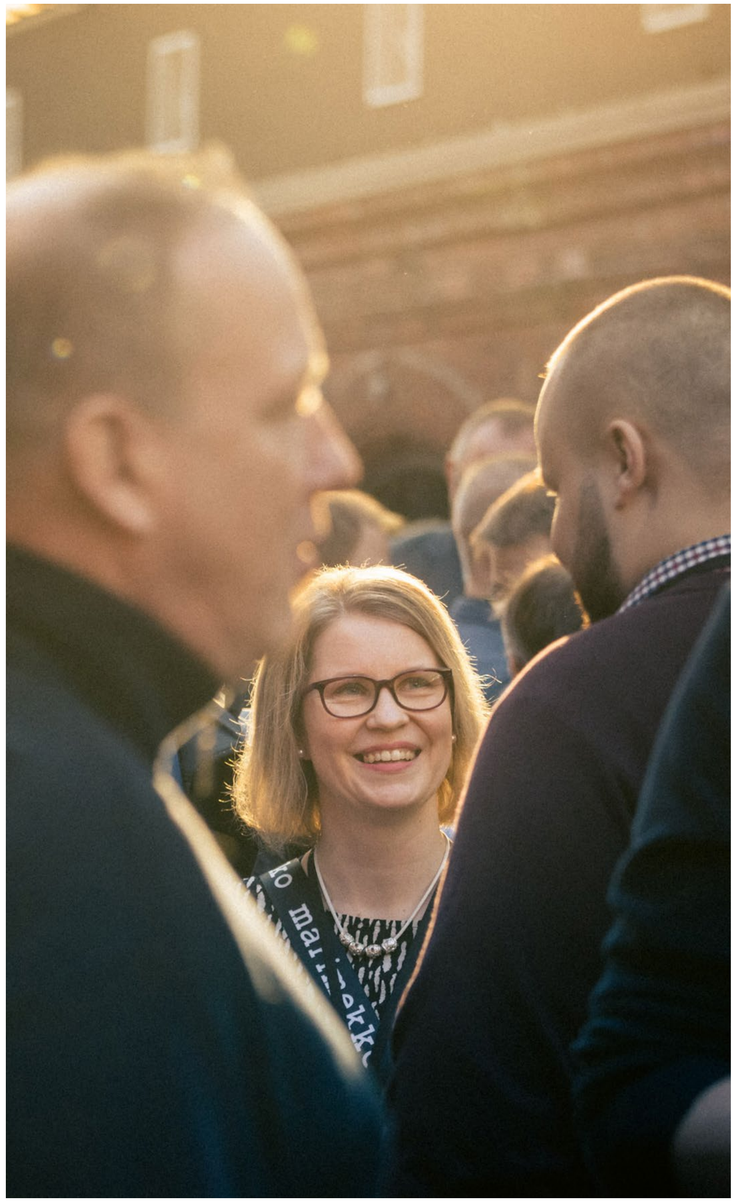
The tight fiscal situation and challenging economic environment made the year demanding. Geopolitical shifts and increasing competition for research funding continue to add uncertainty. GTK's strategic goal of broadening its funding base is progressing, particularly in international project activities, but financial pressures remain. Increasing revenue-based financing is still essential, especially since many industries in Finland are holding back major investments.

In 2025, we began preparing a new international activities strategy. Demand for GTK's expertise is growing especially through global partnerships, making international collaboration crucial for growth and economic development. The strategy aims to secure the necessary resources, such as personnel, and to define responsible operating principles for GTK's international activities. The strategy will be completed in 2026.

We carried out a sustainability impact assessment (see chapter 3.2) in autumn 2025. Economic risks and opportunities were excluded from the assessment. However, we recognise that changes in the operating environment significantly affect the conditions for successful activities and GTK's financial balance. These changes strongly reflect in the needs of our customers and stakeholders. For example, biodiversity loss increases restrictions and obligations for land use, but GTK's data supports efficient land use, better site selection of infrastructure, and protection of habitats.

The most significant changes in our finances and operations are found in GTK's Financial Statement and Annual Report 2025.

GTK key figures 2025		
Expenditures, M€		56.8
Revenues, M€		21.2
Income from contract services, M€		8.3
Personnel, person-years worked		464
Revenues by customer segment 2025	**M€**	**%**
Central government	6.2	29%
Municipalities	1.8	9%
Private sector	3.9	18%
Export projects	3.7	17%
Other customers	5.6	27%
Total	**21.2**	**100%**
GTK expenditure structure 2025	**1,000**	**%**
Salaries and wages	33,875	60%
Facility costs	5,651	10%
Materials, equipment and supplies	1,626	3%
Services purchased	10,391	18%
Travel expenses	1,969	3%
Investments	1,131	2%
Other expenses	2,191	4%
Total	**56,835**	**100%**
Total funding	**M€**	**%**
Total funding	56.8	
Co-financed and co-operation income	12.9	23%
Revenue from commercial projects	8.3	15%
Core funding	35.7	63%



2.2 Commitments and stakeholder engagement

As a governmental research institute, we are committed to the UN Sustainable Development Goals and the UN Agenda 2030 roadmap for Finland. GTK is a non-business participant of the UN Global Compact initiative and adheres to its ten principles relating to human rights, labour, the environment, and anti-corruption.

Sustainability is embedded in GTK's management system and related policy frameworks, including our environmental policy and risk management practices. GTK's Code of Conduct outlines the core principles guiding our operations and interactions with stakeholders. All GTK employees must complete training on the Code of Conduct, and we expect our partners to commit to the same principles.

As part of our customer relationship survey (see chapter 4.2), we surveyed customers' views on responsibility and sustainability. Of the respondents, 72% agreed fully or somewhat that GTK had supported them in achieving their sustainability goals (2023: 73%). Customers expect even greater support from GTK in developing sector specific sustainability through research-based knowledge.

In 2025, we carried out a sustainability impact assessment in collaboration with an external partner (see chapter 3.2). Understanding of our sustainability impacts was further examined through a supplementary stakeholder interview. Representatives of stakeholders from across GTK's value chain participated in the interview. The purpose was to gather stakeholders' views on the scope, risks, and opportunities related to GTK's sustainability impacts, in order to ensure that we can comprehensively address stakeholder needs in the future.

Public perception of GTK remains positive: in the Luottamus&Maine barometer, our overall reputation score was 3.45 in 2025 but had declined slightly from the previous survey (2024: 3.55). Sustainability remains the second strongest component of GTK's reputation.

Sustainability is the second strongest component of GTK's reputation.

2.3 Highlights of the year

Research to serve society and customers

x 1,800

We published seven policy briefs on GTK's key research focus areas. They were launched in a webinar series that attracted more than 1,800 participants.

Our customers are increasingly likely to recommend GTK. In the customer relationship survey, we achieved an excellent Net Promoter Score (NPS) of 60, our highest score to date.

152 articles

Our research achieved broad visibility and impact: GTK experts published a record 152 peer-reviewed scientific articles, exceeding the target of 120 publications.

Human-focused working life

We launched a new operating approach supporting Diversity, Equity and Inclusion (DEI) in project activities, offering tools for project managers to consider DEI in all project phases.

Responsible governance

Launched at the beginning of the year, GTK Way introduces all employees to shared principles, guidelines and operating practices. By early 2026, staff had completed 76% of the training programme.

The European Commission selected GTK to lead a EUR 7.5 million critical raw materials project covering five Central Asian countries. The EU considers it one of the most significant cooperation projects on critical raw materials in the region.

EUR 110 million

GTK's largest investment to date, the renewal of GTK Mintec, progressed to the planning phase. The EUR 110 million development project will expand both the pilot plant's capacity and the research infrastructure. The investment strengthens the role of Finland and GTK in the circular economy and responsible mining.

3. Sustainability

Our sustainability goal is to seek more sustainable alternatives for the environment, people and the economy – For Earth and For Us. We aim to make choices that create positive impacts while reducing negative ones. We are committed to responsible and impactful scientific research, a human-focused working life, and ethically sustainable operations.

We identify operational risks, challenges related to our operating environment, and long-term impacts. This includes developing services for industry that take environmental impacts into account, as well as research methods that minimise harm to nature.

The purpose of GTK's sustainability impact assessment carried out in 2025 was to map the areas of our operations that have the most significant impacts across our value chain. The results are presented in chapter 3.2, Sustainability impact assessment.

Our sustainability goal is to seek more sustainable alternatives for the environment, people and the economy.

We seek more sustainable alternatives for the environment, people and the economy – For Earth and For Us

Research to serve society and customers

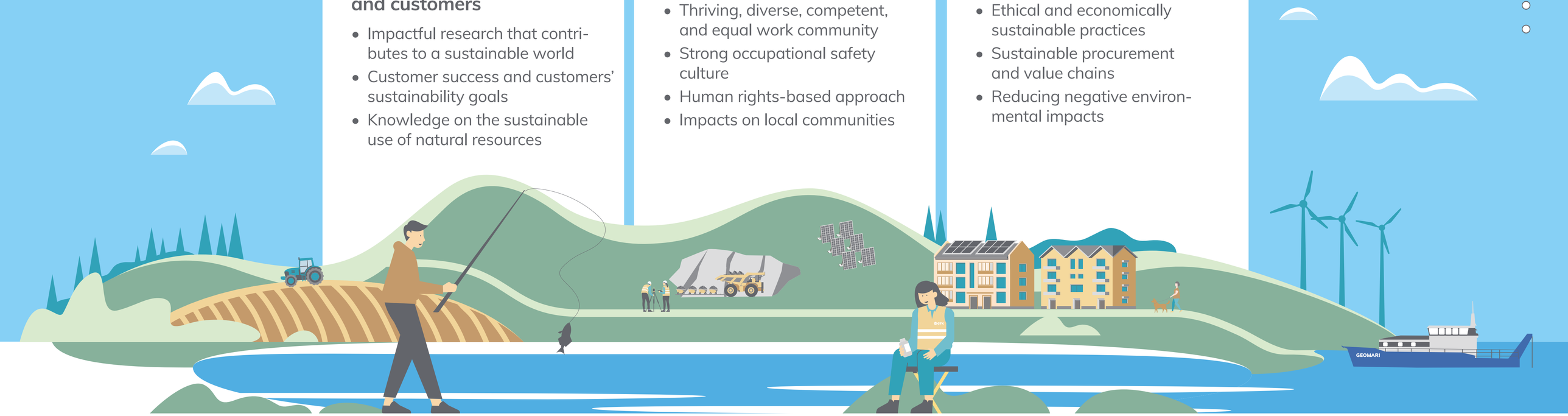
- Impactful research that contributes to a sustainable world
- Customer success and customers' sustainability goals
- Knowledge on the sustainable use of natural resources

People's wellbeing

- Thriving, diverse, competent, and equal work community
- Strong occupational safety culture
- Human rights-based approach
- Impacts on local communities

Responsible governance

- Ethical and economically sustainable practices
- Sustainable procurement and value chains
- Reducing negative environmental impacts



3.1 Managing and developing sustainability

Sustainability at GTK is overseen by the Director General. Development and coordination of sustainability are part of the Communications and Sustainability unit and the responsibility of the Director of Communications and Sustainability, a member of the Management Group. Sustainability is integrated into strategic management and coordinated across the organisation.

Policies and targets related to sustainability are discussed by the Management Group three times a year in March, September, and December accordance with the annual cycle and based on proposals presented by the Director of Communications and Sustainability. Progress is reported annually in the sustainability report, approved by the Management Group.

Sustainability group composed of representatives from the operative units and management responsibility areas supports the production of the sustainability report and provides input on sustainability-related measures. The group meets four times a year. Presentations to the Management Group concerning sustainability are primarily prepared within the group.

In addition to the sustainability group, GTK has a DEI group, whose role is to explore ways to promote diversity, equity, inclusion, and gender equality among personnel.

3.2 Sustainability impact assessment

To steer sustainability work in an increasingly knowledge- and impact-driven direction, GTK conducted a sustainability impact assessment in autumn 2025. The assessment was funded by the State Treasury's Kaiku development funding and carried out in collaboration with Sweco Finland Oy.

Central component was building a comprehensive understanding of the value chains in which GTK operates and which influence GTK's operations. Mapping the entire value chain provides a more accurate picture of our most significant positive and negative impacts.

Description of the value chain was developed jointly by GTK's project team and Sweco based on extensive background materials and stakeholder interviews. The sustainability group and the Management Group reviewed and commented on the value chain description before its approval.

The value chain description outlines the areas of GTK's operations that generate the most significant positive and negative impacts. Because our research and expert services support a wide range of sectors in both Finland and in international activities, it is not meaningful to categorise GTK's value chain by industry. Instead, our research outputs and geodata, and their diverse areas of application, form the basis of our overall impact.

GTK’s value chain

Capital inputs

Human and competence capital
Personnel and networks

Knowledge capital
Geodata assets

Technological capital
Research infrastructure

Core operations

- Ideation and development
- Research and expert work
- Dissemination and evaluation of results
- Networks and collaboration
- Procurement

Services and outputs

- Availability of raw materials
- Water resources and water management
- Environment and land use
- Energy transition
- Circular economy of minerals

- Expert services
- Geoscience data
- Innovations
- Research knowledge

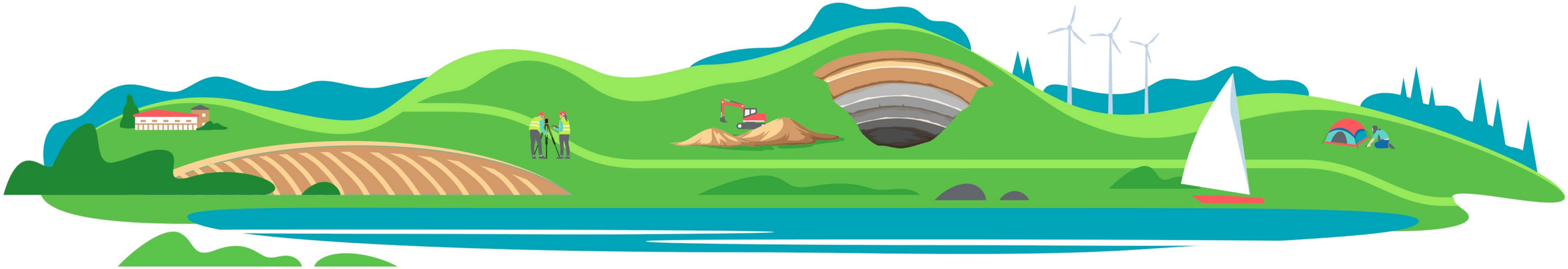
Value added for stakeholders

Academic outcomes

- Geoscience data
- Scientific publications
- Research infrastructure
- Development of research methods
- Production of applied research

Value added for society and business

- Providing knowledge to support decision-making
- Supporting business development
- Renewal of industry and improving operating conditions



Impartial research to accelerate the transition to sustainable, carbon-neutral world

GTK's most significant positive impacts relate to the environment.

The sustainability impact assessment examined the positive and negative impacts of GTK's operations on the environment and people across the value chain. Economic impacts were excluded from the scope of this assessment. In total, 113 sustainability impacts were identified, of which 52 were assessed as material.

In addition to GTK's background materials and the value chain description, the assessment drew on the results of stakeholder interviews, foresight work conducted by Sweco, publicly available data sources, and expert input. The background materials included information on GTK's sustainability work, service models and service portfolios, market segments, previous stakeholder surveys, and the value chain of metals and minerals.

Understanding of the impacts was further deepened through a supplementary stakeholder interview. Representatives of stakeholders from across GTK's value chain participated in the interview.

The identification and definition of the key value chains influencing our operations and the assessment of sustainability impacts align with the EU's Corporate Sustainability Reporting Directive (CSRD) and associated standards.

Materiality was assessed based on scale, scope, remediability, and likelihood. Likelihood was assessed only for potential negative or positive impacts, and remediability only for negative impacts. Where an impact related to human rights, likelihood was not assessed.

Impacts may occur in the short, medium or long term. They can be potential (may occur) or actual (are occurring or have occurred) impacts.

Key findings of the sustainability impact assessment

- Key environmental impacts relate to climate change, pollution, biodiversity, and ecosystems.
- The most material impacts of our operations are positive, particularly in relation to the availability and sustainable use of natural resources, environmental risk management, and biodiversity.
- Other significant positive impacts include the effects of our research on the availability of critical raw materials, the promotion of the circular economy, and support for society's energy transition.
- In people-related impacts, particular emphasis is placed on affected communities.
- Material people-related impacts include both positive and negative impacts on affected local communities, relating for example to the promotion of a human rights-based approach and the local effects of projects.
- In terms of good governance, impacts relate to organisational culture and political interaction. Key impacts include the positive societal value of the research produced by GTK, as well as potential negative impacts related to risks of misrepresentation of research results and conflicts of interest.

GTK’s sustainability impacts

Environment

- Climate change
- Pollution
- Water resources and marine natural resources
- Biodiversity and ecosystems
- Resource use and circular economy

- Our most significant positive impacts relate to the availability and sustainable use of natural resources, the energy transition, environmental risk management, and biodiversity.
- GTK produces research that supports the energy transition and reduces greenhouse gas emissions in customers’ projects. The knowledge base we provide can influence investments in renewable and low-emission energy production, accelerating clean energy generation, and reducing emissions.
- GTK’s services for the land use sector support the planning of risk management measures that reduce the transport of acidity and metal emissions into water bodies, groundwater, and the environment.
- Our research on marine areas, inland waters, groundwater, and soil supports the management of nutrient loads and natural values. Research-based knowledge used in decision-making leads to better planning solutions: less waste material, better located infrastructure, and reduced environmental impacts.
- Our research services enable the assessment of the concentrations of valuable substances of primary and secondary raw materials, promoting the utilisation of side streams and extractive waste and supporting the circular economy of minerals. Our research supports the reduction of resource losses and advances circular economy principles.

Society

- Own workforce
- Workers in the value chain
- Communities affected by impacts
- Consumers and end users

- Our most significant societal impacts relate to communities affected by activities, including the promotion of a human rights-based approach and the local impacts of mining and land use projects.
- The knowledge and expert services produced by GTK improve project planning and implementation, contributing to job creation associated with projects. This can strengthen regional infrastructure, support local business activity, and promote social wellbeing.
- GTK’s international activities and expert work support the development of EU standards and legislation and strengthen the capacity of local actors. This improves working conditions, reduces human rights risks, and promotes responsible practices across value chains.

Governance

- Responsible business conduct

- Political interaction and impartial, independent operations have significant impacts.
- Research-based knowledge has a strong positive impact on society.
- GTK’s research supports Finland’s Mineral Strategy and contributes to increasing raw material self-sufficiency within the EU and safeguarding critical infrastructure. Our expertise is utilised to strengthen geopolitical resilience and national defence capability.
- Risks include the misrepresentation or fraudulent use of research data by external parties.

3.3 Sustainability indicators 1/3

Focus area	Medium-term goals	Indicators
Research to serve society and customers	Our research is impactful and contributes to building a sustainable, carbon-neutral world	• **Projects contributing to UN Sustainable Development Goals number/goal (chapter 4)** • **Open Science and Research monitoring (OSR),** 2024: level 3 (scale 1–5)

	Research and innovations help our customers succeed and achieve their own sustainability objectives	• **Customer relationship survey**
		  • Overall satisfaction (%), 2025: 85% (2023: 74%)
		  • Net promoter score (NPS), 2025: 60 (2023: 57)
		  • Cooperation and innovation (%), 2025: 74% (2023: 74%)
		  • GTK has supported the customers' sustainability objectives (%), 2025: 72% (2023: 73%)
		• **Customer feedback indicator, continuous feedback (scale 1–5);** 2025: 4.7 (2024: 4.7)
		• **Invention disclosures,** 2025: 1 (2024: 2)
		• **HenkilöstöBaro personnel survey**
		  • Resilience index, 2025: 3.17 (good level)

	We provide knowledge on the sustainable use of natural resources to support decision-making	• **Scientific publications**
		  • Share of open access publications (%), 2025: 84% (2024: 80%)
		  • Number of scientific publications, 2025: 152 (2024: 120)
		  • International co-publications (%), 2025: 72% (2024: 62%)
		  • Publications produced in cooperation with companies (%), 2025: 16% (2024: 14%)
		• **Peer-reviewed publications by type, 2025 (chapter 4.3)**
		• **Requests for statements,** 2025: 156 (2024: 155) (chapter 6.1)

3.3 Sustainability indicators 2/3

Focus area	Medium-term goals	Indicators

People's wellbeing	Our work community is thriving, diverse, competent, and equal	• **HenkilöstöBaro personnel survey**
		  • Overall satisfaction, 2025: 3.20 (good level)
		  • Willingness to recommend (eNPS), 2025: 37 (good level)
		  • Work capacity score, 2025: 8.19 (good)
		  • Personal work index, 2025: 3.37 (excellent level)
		  • Work community index, 2025: 3.05 (good level)
		  • Leadership index, 2025: 3.26 (excellent level)
		  • Psychological safety index, 2025: 3.34 (excellent level)
		• **Equal pay index,** 2025: 99% (2024: 99%)

	Our operations are based on a human rights-based approach, and we recognise the impacts of our activities on local communities	• **Misconduct reports (Whistleblower),** 2025: No cases (2024: 1) • **Luottamus&Maine barometer (public trust and reputation)** • Responsibility score, 2025: 3.58 (good result) (2024: 3.86, good result)

	Our occupational safety culture is strong	• **Occupational accident statistics**
		  • Accident frequency rate (LTI), 2025: 7.3 (2024: 4.5)
		  • Occupational accidents resulting in absence, 2025: 5 (2024: 3)
		  • Minor accidents (no absence), 2025: 20 (2024: 19)
		  • Absence days due to occupational accidents, 2025: 15 (2024: 72)
		• **Reported safety observations,** 2025: 278

3.3 Sustainability indicators 3/3

Focus area	Medium-term goals	Indicators

Responsible governance	We operate in an ethical and economically sustainable manner	• **Key figures 2025 (chapter 2.1)**
		  • Expenditures
		  • Revenues
		  • Income from contract services
		  • Revenues by customer segment
		  • Expenditure structure
		  • Total funding
		• **Total value of procurement (EUR million),** 2025: 20.68 (2024: 24.12)
		• **Suspected violations of the Responsible Conduct of Research (RCR),** 2025: No cases (2024: 1)

	Our value chains and procurement practices are sustainable	• **Sustainable procurement (chapter 6.2)**
	We reduce the negative environmental impacts of our operations	• **Carbon footprint of procurement (chapter 6.2)**

4. Research serving society and customers

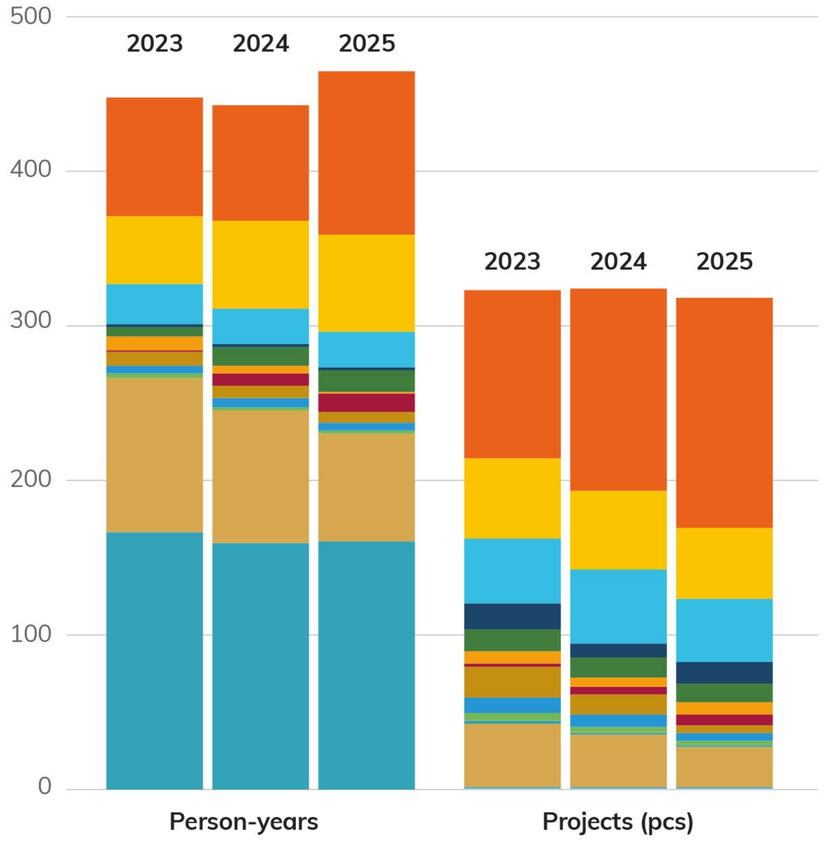
As a research and expert organisation, our most significant means of promoting responsibility and sustainability is the production of knowledge and solutions. Our operational results are generated through project activities, making projects critical to our effectiveness and impact.

Since 2021, we have monitored our project portfolio in relation to the UN Sustainable Development Goals (SDGs). Each project is assigned the primary SDG it contributes to. The number and share of projects contributing to the SDGs have remained high, accounting for 83% of the project portfolio in 2025.

For 2025, we continue to examine our impact through the five SDGs where GTK's operations have the strongest effect.

From the beginning of 2026, the assessment will shift to the areas of significant impact identified in the sustainability impact assessment (see chapter 3.2), aligning with the EU Corporate Sustainability Reporting Directive (CSRD) and the standards specifying it.

Contribution of GTK's projects to the UN Sustainable Development Goals, 2023–2025



	Person-years			Projects (pcs)		
	2023	2024	2025	2023	2024	2025
Industry, innovation and infrastructure	77	75	106	109	131	149
Affordable and clean energy	44	57	63	52	51	46
Clean water and sanitation	26	23	23	42	48	41
Partnerships for the goals	2	2	2	17	9	14
Climate action	6	12	14	14	13	12
Sustainable cities and communities	9	5	1	8	6	8
Decent work and economic growth	1	8	12	2	5	7
Responsible consumption and production	9	8	7	20	13	5
Life below water	5	6	5	10	8	5
Life on land	3	2	2	4	3	2
Zero hunger	0	0	0	1	1	1
Good health and well-being	0	0	0	2	1	1
Other	100	86	70	41	34	26
Other operations	167	160	161	1	1	1
	449	444	466	323	324	318

For each GTK project, a primary UN Sustainable Development Goal (SDG) is defined to indicate the goal to which the project contributes most. In the graphic, the category "Other" refers to projects for which no single SDG was designated as the primary goal. "Other operations" covers GTK's other activities, such as support functions.

4.1 Sustainable use of natural resources

GTK's research has significant impacts on the availability and sustainable use of natural resources, environmental risk management across sectors, and biodiversity protection in land use planning. Our research services provide customers and partners with tools to reduce resource waste and to promote circular economy principles.

We support the availability of mineral raw materials by advancing domestic and European mineral potential assessments, mineral processing, circular economy, and raw material partnerships. GTK helps customers develop solutions for ore and industrial mineral processing, water management, and the utilisation of extractive waste and side streams. Europe's reliance on imported critical raw materials makes sustainable value chains essential for environmental, human rights, and mineral traceability reasons.

This section outlines the impacts of our operations on the sustainable use of natural resources and on the Sustainable Development Goals.

UN Sustainable Development Goals relevant to GTK

We have identified the UN Sustainable Development Goals where our operations can have the most significant impact.

Clean water and sanitation

- We promote the sustainable use of water resources and effective risk management in Finland and internationally.
- We generate new geological research knowledge and service concepts for water management in industrial and mining environments.
- We strengthen hydrogeological expertise by renewing groundwater resource research and monitoring in a changing environment.

Affordable and clean energy

- We promote low-carbon energy production, feasibility, and safe deployment.
- Research and innovations produced through international cooperation increase the safe and sustainable utilisation of low-carbon energy production.

Industry, innovation and infrastructure

- We promote responsible mining.
- We research and enable efficiency in the minerals and metals value chain and the reduction and utilisation of side streams through circular economy solutions.
- Our research on the availability of mineral raw materials promotes security of supply.
- We contribute to sustainable construction.
- We generate innovations and new research methods.

Climate action

- We support adaptation to climate change and environmental risk management.
- We promote sustainable use of natural resources and nature compensation.
- We collaborate to preserve biodiversity and to prevent biodiversity loss.

Partnerships for the goals

- We promote the development, transfer, and dissemination of environmentally sound technologies to developing countries.
- We strengthen global partnerships for sustainable development.

Clean water and sanitation

Our research focuses on two main areas: mining environments and the sustainable use of groundwater.
We develop, for example, managed aquifer recharge (MAR) solutions, water supply risk management, groundwater monitoring, and water management planning.

Our focus areas

- Groundwater resources
- Water resources risk management
- Water management in mining environments

GTK's expertise is applied to comprehensive water management issues, including groundwater availability and quality risks. Water management is also a key component of environmentally sustainable mining operations and management of waste sites. We engage in international collaboration related to water resources management, support the development of local capacity, and produce hydrogeological datasets. International cooperation is based on active participation, for example, in the Finnish Water Forum.

41 projects contributing to UN SDG 6 in 2025

Our progress – highlights from 2025

We began groundwater surveys to secure water supply and security of supply in the Oulu region and the city of Mikkeli. Known groundwater resources in the Oulu region are scarce, and water quality issues are common. In the OUVETUR project, GTK is investigating less well-known, deeper sections of esker aquifers. In Mikkeli, surveys are underway to assess whether the city's water supply can be supported by utilising bedrock groundwater resources. The MIKAPO project is also developing survey methods that can be used more generally in bedrock groundwater surveys.

The research project Environmental Impact of Mineral Exploration (METYV) examines the effects of drilling and drilling chemicals on the environment, groundwater and biodiversity. The goal is to increase the availability of research-based knowledge to support, for example, decision-making by authorities and to develop methods to reduce the environmental risks associated with mineral exploration.

The condition of Finland's streams is poor, and only a few per cent of natural rivers and streams remain. As much as one third of rivers are in less than good ecological status. In the UOMARI project, drone-based solutions and novel technologies were developed for mapping stream channels and mining ponds. These methods provide increasingly accurate data to support the restoration of aquatic ecosystems and risk management in mining environments.

GTK is involved in two groundwater research cooperation projects in five Central Asian countries: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan. These countries face increasing threats from natural hazards, such as floods, landslides and intermittent water scarcity, as a result of climate change and more frequent extreme weather conditions. Changes in precipitation patterns, longer dry periods and increased evaporation affect both the quantity and quality of groundwater. GTK's tasks focus on groundwater monitoring and modelling, as well as capacity building in the partner countries.

Within the framework of EU TAIEX INTPA cooperation, we provided technical and practical support for the implementation of Vietnam's revised Water Resources Law. The cooperation focused in particular on groundwater protection and monitoring, as well as the implementation of managed aquifer recharge. The work included the exchange of practical experience and information on legislative requirements for groundwater management between Finnish experts and experts from Vietnam's Ministry of Natural Resources and Environment.

Affordable and clean energy

We support the energy transition towards cleaner and more sustainable energy production. Our research focuses on the planning, usability and deployment of low-carbon energy solutions.

Our focus areas

- Geothermal energy
- Nuclear energy site selection, safety and nuclear waste disposal
- Underground storage of hydrogen and energy
- Offshore wind power
- Energy security

Ou research supports increasing the share of low-carbon energy in energy production. We expect the role of geothermal energy and nuclear energy to continue to grow as part of decentralised national and regional energy systems.

Our research on geothermal energy helps to increase the use of carbon-free energy sources and to diversify energy production, including within district heating networks.

In nuclear energy research, we focus on site selection for both conventional nuclear power plants and small modular reactors (SMRs), the disposal of nuclear waste, and long-term safety.

We promote the deployment of renewable energy by developing thermal energy storage solutions and solar and wind power applications on former peat extraction sites. In addition, we study seabed structures to support the planning of offshore wind power.

We support the growth of the hydrogen economy by investigating the occurrence and utilisation of natural hydrogen and other natural gases, as well as underground hydrogen storage.

46 projects contributing to UN SDG 7 in 2025

Our progress – highlights from 2025

The Geoenergy Leap project accelerates the implementation and deployment of medium-deep geothermal energy wells in Finland across three target regions. During 2025, a new medium-deep geothermal well was drilled in the city of Oulu and approximately 700-metre deep research well was completed in the city of Kotka. These energy wells are part of a permanent geothermal energy research and development environments established in cooperation with the project partners. The project promotes renewable, non-combustion-based energy solutions for heat production in northern climate.

We carried out the first regional assessment of potential sites for underground hydrogen storage in Northern Ostrobothnia. The study identified dozens of sites suitable for hydrogen storage, of which 11 were classified as particularly promising. The study supports Finland's carbon neutrality targets and provides valuable information for companies and authorities in planning hydrogen infrastructure.

As the number of ground heat systems has increased in the city of Helsinki, concerns have emerged about the effects of borehole fields on the geothermal resources of neighbouring properties. In cooperation with the city of Helsinki and Solita, GTK developed and published a new online service eVala that enables designers of ground source heat systems and companies in the sector to assess the thermal effect of borehole fields. The free and open online service promotes equity among residents, service efficiency, and climate goals in urban development.

We published the first research results on the occurrence of lineaments in the Uusimaa region to support site selection studies for small modular reactors (SMRs). The structural and geological characteristics associated with lineaments play a critical role in the safe site selection and risk management of SMRs. The report provides additional information and new perspectives on how SMR site selection can be approached using current technologies.

On commission from Metsähallitus, we completed the preliminary studies of five potential offshore wind power sites located in Finland's territorial waters. Based on the research results, Metsähallitus will continue to develop the areas for offshore wind power plants.

In the REPower-CEST project, we investigated the construction of solar power plants on rewetted peatlands, particularly on former peat extraction sites. Raising the water table can reduce climate emissions from peatlands, improve fire safety and limit tree growth, while enabling solar energy production. Parallel land uses, such as restoration, Sphagnum moss cultivation and the promotion of biodiversity, offer opportunities for multi-purpose land use, but require the alignment of regulation and permitting practices.

Industry, innovation and infrastructure

We promote sustainable construction, innovation and industry, including responsible mining.

Our focus areas

- Circular economy
- Technology and research method development
- Raw materials
- Construction and land use

A systemic shift towards the circular economy in the mining sector supports investments, technological progress and EU's raw material supply.

GTK's circular economy research focuses on solutions for ore and industrial mineral processing, handling process water, extractive waste and side stream utilisation, and recycling. Our expertise in extractive waste, mine water and long-term material behaviour supports responsible industrial operations and infrastructure design.

GTK Mintec is a unique research and service platform that promotes sustainable mining and the circular economy. It studies and tests the beneficiation potential of minerals and mineral-based materials, as well as the recyclability of various side streams. At GTK Mintec, we are able to examine the entire value chain, from ore deposits to mine closure, the reuse of materials, and the long-term behaviour of extractive waste.

We carry out technology and method development in several projects and in close cooperation with customers. Our innovative solutions and expertise are in demand beyond Finland.

We generate knowledge related to soil and bedrock that provides a foundation for the development of sustainable infrastructure and industry.

Challenges related to raw materials are global and multifaceted. We study the potential, uses and impacts of different minerals. We also investigate and map minerals contained in extractive waste and tailings areas. GTK's national archive of drill cores and other geological samples serves the mineral needs of future generations.

To support the planning and implementation of sustainable urban development, we have developed data presentation methods based on geological and geophysical information. The use of these methods improves cost efficiency in the construction of urban and transport infrastructure, particularly in bedrock and fine-grained sediments. We work in continuous cooperation with sector stakeholders to ensure that the data are integrated into land use planning and construction processes. We also promote the use of domestically produced and recyclable natural stone in construction.

The solutions we develop for managing environmental change and risks enhance the sustainable use of land and water-covered areas. We provide solutions for the utilisation of the seabed and for safe and cost-effective operations in geochemical risk areas.

We develop modern, environmentally conscious and cost effective geophysical survey, sounding and interpretation services for soil and bedrock.

149 projects contributing to UN SDG 9 in 2025

Our progress – highlights from 2025

Research into the circular economy and the utilisation of secondary raw materials progressed in several ways. In the SETELIT project, results were published on the use of tailings as a low-carbon hardening paste backfill material and concrete-substituting material outside of mining areas. To facilitate the reuse of tailings, the project published a guide on the removal of the waste status of tailings and improving their productisation.

To support the comprehensive utilisation of ores and the safe management of tailings, a software tool was developed in the Clean Energy System Transition (REPower CEST) project. The tool identifies and characterises critical raw materials from mineral processing waste streams. Information on the long-term behaviour of waste and the potential for co-disposal was obtained using the GTK SMARTTEST field-testing platform.

We conducted an assessment of the availability of aggregates required for construction projects in the Central Ostrobothnia region. The objective was to identify new operation and production sites for aggregates to meet the needs of current and future operators in the region. The results support local aggregate production, helping to reduce emissions from construction and to improve the efficiency of resource use in construction projects.

The peat resources of Central Ostrobothnia have potential as a domestic raw material for high added-value carbon applications, such as activated carbon and anode carbon, which can be utilised particularly in the battery industry. In research conducted by GTK and the University of Oulu, the properties, suitability and raw material potential of the region's peat resources were assessed. The project Peat as a Raw Material for Carbon Applications in Central Ostrobothnia (TUUMA) was based on the objective of developing clean and intelligent chemical and technological solutions particularly for the needs of the battery industry.

Our research to identify acid sulfate soils and black shale deposits, assess their impacts on water bodies and the environment as well as related risk management, continued across several projects. We conduct the research in cooperation with universities, other research institutes, authorities, cities and municipalities, companies, and environmental authorities.

We developed new methods for mapping the geotechnical properties of the seabed to support planning and risk management in subsea construction. The mapping methods and assessment criteria enable the identification of geologically valuable areas and support sustainable marine construction design.

Climate action

GTK's research supports society's capacity and understanding to adapt to the environmental impacts of climate change. We promote the more sustainable use of land and marine areas and the safeguarding of diverse habitats.

Our focus areas

- Environmental impacts and adaptation to climate change
- Carbon sinks and carbon storages from land to sea
- Land use, the built environment and risk management

Adapting to the impacts of climate change requires wide-ranging actions across society. Our research provides a geoscience-based approach to the sustainable use of the environment and the preservation of biodiversity.

GTK supports Finland's climate and carbon neutrality targets by promoting research and the deployment of low-carbon energy production, while strengthening the management of climate related risks in land use and construction.

We provide expert services to assess carbon sinks and carbon storages in soils and water-covered areas and to reduce risks to them. This fasilitates the preconditions for effective carbon market operations in Finland.

A changing climate affects groundwater recharge. Changes in temperature and precipitation patterns, together with increasingly frequent extreme weather events, influence both the quantity and quality of groundwater recharge. We develop methods to identify the impacts of climate change on groundwater resources and to mitigate these impacts.

We engage in multidisciplinary collaboration with other research institutes, higher education organisations and companies, enabling impactful work at both national and international levels. Training and the deployment of new research innovations increase societal awareness of the environmental impacts of climate change.

12 projects contributing to UN SDG 13 in 2025

Our progress – highlights from 2025

GTK participated in the joint project New Measures and Scenarios for National Energy and Climate Policy (KEITO), which resulted in the publication of a report on Finland's long-term climate scenarios. The report presents four alternative scenarios for the development of Finland's emissions and carbon sinks up to year 2050. It provides decision-makers with information on the measures and preconditions for Finland to achieve its long-term climate targets.

We examined the factors driving the accumulation of organic carbon in the bottom sediments of boreal lakes. A comprehensive study of 208 Finnish lakes showed that organic carbon is buried in lake sediments at a significantly faster rate than previously estimated, although most of it is still released back into the atmosphere as carbon dioxide and methane. Research conducted within the Blue Lakes project provides further insight into lake carbon sinks and their role in the carbon cycle. The results can be utilised in national-level assessments of the annual amount of carbon burial.

GTK took part in an international research group examining the exceptional nature of the ongoing climate change. The study showed that similar climatic conditions have occurred before in Earth's history, but the current change is more rapid and more intense. By the end of the century, Europe's extreme summers could become longer and extend by more than a month. Such changes would have significant impacts on agriculture, ecosystems and everyday life.

The results of the RahKoo project showed that Sphagnum moss harvesting could be a sustainable alternative to horticultural peat in terms of climate and biodiversity. The results indicate that under optimal conditions where Sphagnum regeneration is ensured, the growing medium becomes carbon negative. The project was implemented in close cooperation with industry actors and other stakeholders to ensure the effective practical application of the results.

Groundwater is a vital natural resource in the arid regions of Uzbekistan, where surface water resources are limited and highly seasonal. The Akhangaran River Valley aquifer in eastern Uzbekistan is crucial for water abstraction for households, agriculture, industry, and mining. This shallow aquifer is increasingly vulnerable to the impacts of climate change and human activities. In cooperation with local researchers, we developed a groundwater flow model to assess the effects of different climate scenarios.

Partnerships for the goals

We work in Finland and internationally together with our partners. GTK's expertise is internationally recognised. We provide the latest research-based knowledge, train local experts, develop solutions, and together with partners, integrate expertise and methods from multiple scientific disciplines.

Our focus areas

- Research and training cooperation
- Capacity building and training in development cooperation
- Integration of interdisciplinary expertise and methods

GTK operates in key collaboration platforms, consortia and networks. We have representatives in the European Environment Information and Observation Network (EIONET), the Finnish National IPCC Working Group, and the National IPBES Working Group. We also contribute to the United Nations Environment Programme (UNEP), and our expert serves as a member of the Finnish Nature Panel.

14 projects contributing to UN SDG 17 in 2025

Our progress – highlights from 2025

The EUR 7.5 million Central Asia critical raw materials cooperation project was launched at the end of the year. The European Union has identified the project as one of the most important regional raw materials partnership initiatives. GTK has overall responsibility for the project and serves as its coordinator. In addition, we are involved in two groundwater research projects implemented in five Central Asian countries: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.

GTK and the Ministry of Water Development and Sanitation of Zambia agreed on a partnership related to hydrogeology, managed aquifer recharge (MAR) solutions and water resources management. Previously, GTK has concluded a partnership on geological research and innovation with Zambia's Ministry of Mines and Minerals Development.

GTK commenced as the lead coordinator in the EU Geological Partnership country window projects with Zambia and Tanzania related to the implementation of the EU Critical Raw Materials Act (CRMA). In addition, we act as an implementing partner in the EU country window projects in Uganda, Namibia and South Africa.

GTK has played a key role in the implementation of Finland's National Mineral Strategy. GTK's position as a European actor was also significantly strengthened with the completion of the national exploration programme in accordance with the EU Critical Raw Materials Act.

The recently concluded EGT TWINN project provided a platform for advancing research and innovation cooperation among European geological surveys. The project brought together the surveys of Finland, Denmark and Greenland, the United Kingdom and Estonia, as well as the University of Oulu. Through the European cooperation project, the research capacity and technical capabilities of the Geological Survey of Estonia (EGT) were enhanced to support the country's transition from fossil fuels to clean energy.

4.2 Customer relations and services

At the end of 2025, we conducted a comprehensive customer relationship survey, which is carried out every two years. The survey was conducted by Taloustutkimus Oy and implemented through phone interviews. The sample consisted of GTK's domestic and international customers. When interpreting the results, it should be noted that the number of respondents was a little lower than in the previous survey conducted in 2023.

Customer satisfaction with our services and cooperation has increased. Customer satisfaction improved across almost all areas compared with the previous survey. In particular, GTK's expertise, reliability, and quality of service received positive feedback from customers. The share of respondents who are fully or very satisfied now stands at 85% (2023: 74%).

Customers are increasingly willing to recommend GTK to their partners. The Net Promoter Score (NPS) is now 60 (2023: 57) and represents the highest result in the comparable measurement history.

In addition, 74% of respondents reported that cooperation with GTK has generated new innovations, solutions, or practices to support business development (2023: 74%).

The survey also highlighted areas for development. Some customers would like GTK to identify customer-specific needs better and to pay closer attention to the timeliness of deliveries. Customers also expressed a wish for more proactive contact and communication about services. The importance of communication and interaction has increased since the previous survey.

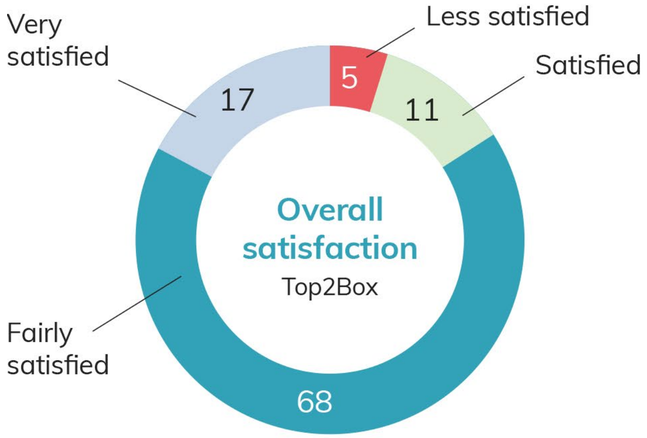
We have strengthened customer work by developing customer relationship management and capabilities. The aim is to further improve customer-oriented culture in order to better understand customer needs.

Since 2023, the survey has also examined customers' views on sustainability. The importance of sustainability is clear: all respondents fully or partly agree that sustainability-related issues are important to their organisation.

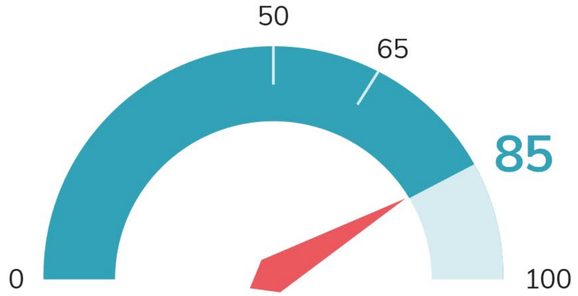
A total of 72% of respondents fully or partly agreed that GTK has supported the achievement of their organisation's sustainability goals (2023: 73%). At the same time, customers expect more support from GTK in developing sustainability within their own sector through research-based knowledge.

The overall satisfaction indicator based on continuous customer feedback for our project activities has remained at a good level (2025: 4.7; target ≥ 4.5). When interpreting the result, it should be noted that customer feedback is received relatively infrequently in relation to the number of projects delivered.

Revenue from our commercial activities (2025: EUR 8.3 million) increased slightly compared with the previous year (2024: EUR 7.96 million) but fell short of the set target (EUR 10.5 million). However, the cost recovery of commercial activities was good, indicating efficient operations. Revenue from fee-based activities was affected primarily by instability in the operating environment.

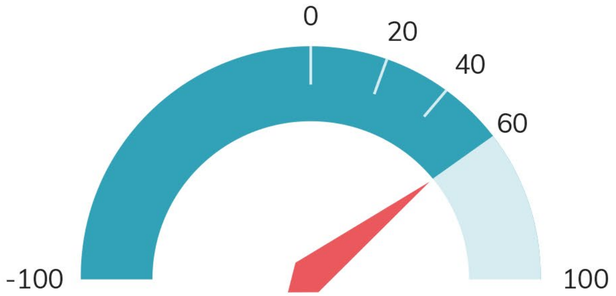


Top2Box = combined percentage of very and fairly satisfied respondents



Overall customer satisfaction

CSI interpretation:
below 50 = poor, 50–64 = average,
65 or above = excellent



Net Promoter Score 2025

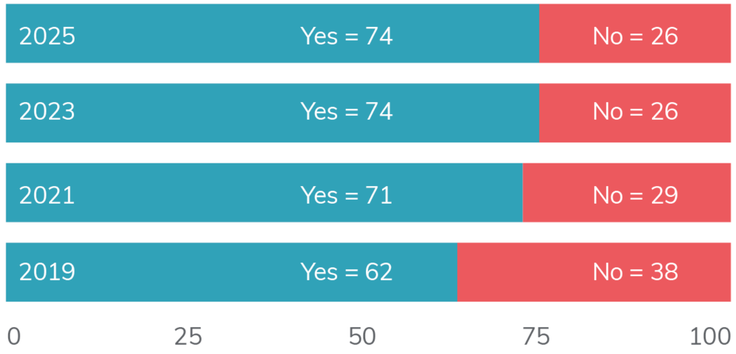
NPS interpretation:
below 0 = poor, 0–19 = fair,
20–39 = good, 40+ = excellent

Net Promoter Score (NPS) is calculated by subtracting the percentage of respondents giving a score of 0–6 from those giving a score of 9–10.

Customer satisfaction with our services and cooperation has increased.

Collaboration and innovation 2019–2025

Collaboration with GTK has generated new innovations, solutions or practices for business development.



4.3 Science in society

In 2025, we launched GTK's Open Science Action Plan. At the same time, we signed the updated Declaration for Open Science and Research 2025–2030 issued by the Federation of Finnish Learned Societies (TSV). Commitment to the declaration reinforces the principles of openness, collaboration and the responsible sharing of research results. GTK researchers are expected to comply with open science practices, including open access publishing, the responsible sharing of research data and the promotion of research reproducibility.

The assessment and monitoring of Open Science and Research (AVOTT) are described in more detail in chapter 6.1, Good governance.

In 2025, we published seven policy briefs linked to GTK's strategic focus areas, as well as one thematic policy brief. The policy briefs present a science-based and well-substantiated perspective on the themes of our research focus areas. The policy briefs are also linked to the United Nations Sustainable Development Goals.

From a research funding perspective, 2025 was a challenging year. We secured EUR 4.3 million in competitively awarded external research funding, which fell below the target level (EUR 6 million) and declined significantly compared with the previous year (2024: EUR 11.1 million). This was primarily due to increasing competition for research funding and a weaker alignment of funding calls with GTK's areas of expertise.

During 2025, one invention disclosure was submitted. The annual number of invention disclosures has remained at a stable level (0–2 per year).

Scientific publications

In 2025, we published a record number of 152 peer-reviewed scientific publications. The number of publications clearly exceeded the annual target (120 publications). Prior to 2025, the publication output had remained stable, with approximately 120 publications published annually between 2022–2024.

The strategic focus of our scientific activity continues to be on increasingly high scientific quality and impact. The strategy places particular emphasis on open science and international cooperation. Of the publications published in 2025, 72% were produced in collaboration with international partners, i.e. they were international co-publications. This represented a clear increase compared with the previous year (2024: 62%). In addition, 16% of the publications were produced in cooperation with companies (2024: 14%).

Approximately 84% of the peer-reviewed scientific publications published in 2025 are open access. The share of open access publications increased compared with the previous year (2024: 80%).

We promote open access publishing by utilising the HELDA open archive maintained by the University of Helsinki, as well as FinELib, the consortium of Finnish universities, research institutes and public libraries.

At present, no systematic, externally defined data have been collected on the contribution of GTK's publications to sustainability goals.

5. Wellbeing of people

Strengthening a human-focused working life is one of the key objectives of GTK's 2024–2027 strategy. We aim to recognise people and their wellbeing as essential preconditions for successful work. GTK's Management Group is responsible for the overall development and removing barriers to progress.

We monitor indicators related to wellbeing, competence, equality, and leadership through an annual personnel survey. This is especially important given that a significant proportion of our staff participate in the personnel survey each year. In 2025, the response rate was 86%.

In 2025, the structure and scale of the central government's HenkilöstöBaro personnel survey were completely renewed. The results are therefore no longer comparable with previous years. New indicators are presented in chapter 3.3 Sustainability indicators.

In the sustainability impact assessment (see chapter 3.2), the most material social impacts were related to working conditions of our own staff, working conditions within the value chain, and impacts on local communities. We are exploring possibilities for collecting systematic monitoring and quantitative data on our social impacts.

5.1 Occupational safety and safety culture

The objective of occupational safety activities is to maintain and promote the health, safety and work ability of personnel, as well as to prevent occupational accidents and work-related illnesses. We promote occupational safety and health through preventive measures. We are committed to consulting and engaging employees in the development of occupational safety activities.

The number of safety observations reported by personnel has increased in recent years, and in 2025 a record total of 278 observations were reported. Based on these reports, we implemented 300 safety-promoting measures during the year. HSE risk assessments were also carried out actively, and more than 60 risk assessments related to work tasks or projects were completed during the year.

The occupational safety organisation, responsibilities and operating practices, as well as the development and monitoring of the working environment, are described in GTK's Occupational Safety Action Plan. Risk management related to occupational safety is addressed through environmental, quality and risk assessments.

We are a member of the Zero Accident Forum, a network of workplaces in Finland aiming for the continuous improvement of occupational safety, wellbeing at work, and the dissemination of good practices. In the safety maturity classification, we achieved Level III – Towards World Class in 2024, compared with Level II – Advancing Towards World Class in the previous year.

GTK's statistics and safety performance have improved since 2023. However, changes have been made to the emphasis of the assessment criteria used in the classification. We are developing our operations in response to the identified areas of improvement. We also applied for the safety maturity classification for 2025, with the results to be published during the following year.

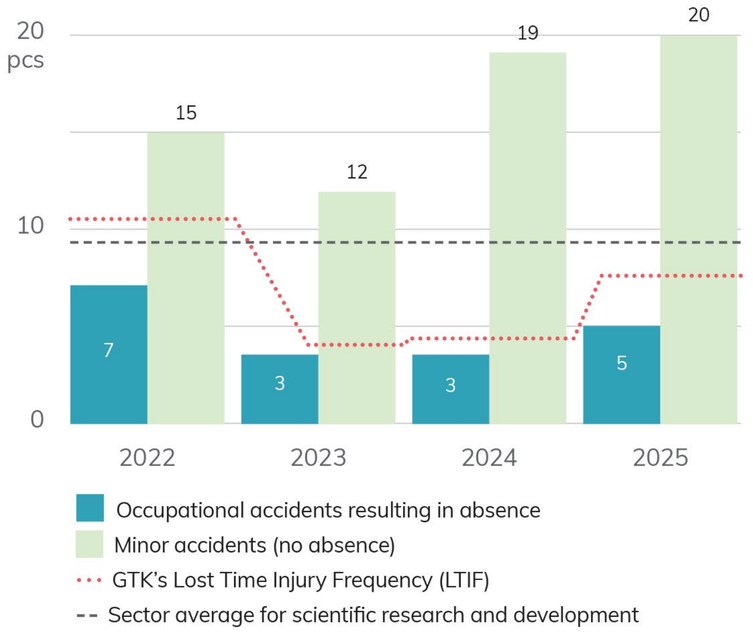
In 2023, we conducted an inspection of the physical security of GTK's premises, followed by a re-inspection the subsequent year. The inspections identified shortcomings, which led to the initiation of several corrective measures. In 2025, a further re-inspection was carried out, and communication to personnel on premises security was significantly increased. As an additional measure, a dedicated TUKO group was established to monitor premises security and matters related to the security environment, and to propose actions to the Management Group.

Accident frequency remains below the sector average

During the year, five occupational accidents resulting in absence from work occurred. This represented an increase of two compared with the previous year. However, the accidents were minor in severity, as reflected in the low number of absence days.

GTK's accident frequency rate in 2025 was 7.3 accidents per million hours worked. The accident frequency increased compared with the previous year.

Occupational safety statistics 2022–2025



The accident frequency rate includes only hours worked in 2025 and occupational accidents occurring at work that resulted in absence. Our target is to keep the accident frequency below the average for the Scientific Research and Development sector (2024: 9.4 / Source: Finnish Workers' Compensation Center).

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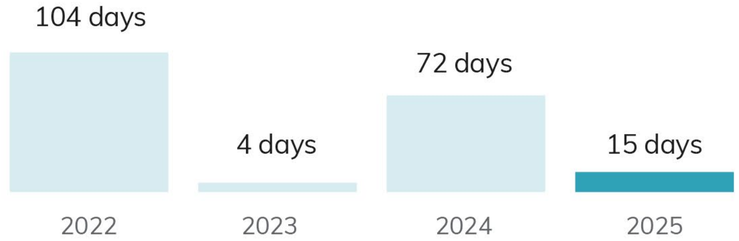
Lost workdays

Lost workdays due to occupational accidents



5.2 Equality, diversity and non-discrimination

Equality, diversity and non-discrimination are integral to the personnel strategy for the 2024–2027 strategy period, which supports our core operations and long-term objectives.

GTK's Non-Discrimination and Gender Equality Plan defines the measures and responsibilities for preventing discrimination. The implementation of the plan is reviewed regularly in employer and staff co-operation.

Strengthening equality, diversity and inclusion is an essential part of GTK's organisational culture and

Employees experience GTK as a safe and encouraging place to work.

processes. As an employer, we are committed to managing personnel-related responsibilities and obligations in a fair and transparent manner.

Diversity, equity and inclusion (DEI) have been a significant focus in the development of our operations in recent years. In 2025, we introduced a new operating model to support DEI considerations in project activities. Several research funding instruments, for example, require gender equality to be addressed in project applications. Project managers can request support on DEI perspectives throughout the different phases of project implementation. This operating model demonstrates our commitment and highlights the importance of DEI at GTK.

Equal pay is an essential element of a fair working life. At GTK, the equal pay index is 99%, which means that women's average earnings are one per cent lower than men's average earnings. The index has remained at this good level since 2023, from which point it has been monitored as part of the sustainability report. Pay equality at GTK is reviewed by the pay system evaluation and monitoring group, which consists of representatives of both the employer and personnel.

In the renewed HenkilöstöBaro personnel survey, psychological safety supplementary index is calculated based on relevant survey questions. At GTK, this index is at an excellent level (2025: 3.34; four point response scale, excellent level > 3.25).

Psychological safety is based on the following dimensions:

- I receive sufficient amount of encouraging feedback
- I feel that I am valued in our work community
- I can be myself in our work community
- It is safe to share thoughts and ideas in our work community
- Interaction within our work community is respectful

5.3 Promoting competence and workplace wellbeing

In our personnel strategy, one of the objectives is to maintain and continuously develop a high level of competence. Particular emphasis is placed on learning that strengthens employees' capabilities in their current or future roles.

Our goal is to expand personnel competence by investing in GTK's core areas of expertise and by ensuring sufficient time for competence development. The development of competence is closely linked to the prerequisites

for our research activities and to our attractiveness as an employer. Objectives for competence development, monitoring and learning leadership form an integral part of the implementation of the personnel strategy.

The broadening of competence is supported through growth paths formed to develop GTK's core competence areas. The leadership growth path was completed previously, while the researcher growth path was completed in 2025. The project management growth path was finalised during 2025 with development funding granted by the State Treasury and will be implemented at the beginning of 2026. Other growth paths are currently under preparation. We also use three career pathway maps to support the planning of employees' professional development. The career pathways describe roles, responsibilities, and the required knowledge and skills at different career paths and career levels.

The purpose of GTK's occupational health care is to promote healthy and safe work, a healthy working environment, and a well-functioning work community. The occupational health care action plan defines the measures and monitoring related to the prevention of health risks and hazards, as well as the maintenance of employees' health and work ability, in accordance with the Healthy Workplace model. GTK updates the occupational health care action plan annually in cooperation with its occupational health service provider.

In 2025, two extensive goal and development discussions between supervisors and employees were conducted at GTK. These discussions involve jointly reviewing and agreeing on setting and monitoring personal goals, as well as assessing performance, competence, wellbeing, job role, and remuneration. In addition, a continuous discussion model is in place, enabling shorter and more flexible conversations to be held throughout the year at appropriate intervals. All GTK personnel in an employment or civil service relationship are covered by the goal and development discussions.

Regarding terms and conditions of employment and remuneration, we comply with the collective agreements for central government employees and civil servants, as well as supplementary collective agreements negotiated locally by GTK, as an agreement agency, with employee organisations.

5.4 Impacts on local communities

We proactively assess and consider the impacts of our operations on local communities. These impacts are examined in cooperation with our stakeholders particularly from the perspectives of land use, the environment, livelihoods, and people's wellbeing.

Within the framework of our project activities, we aim to prevent adverse impacts and to promote positive local effects, including on the conditions for business and employment.

We conduct mineral potential and other bedrock investigations frequently in areas that are also of interest to private mineral exploration companies. To secure research and to ensure GTK's impartial operations, we apply for reservation or exploration area reservations for certain sites in accordance with the Mining Act.

We communicate about field work and its purpose through local media and, whenever possible, through outreach to regional actors, associations and communities. When operating on private land, we always obtain the landowner's consent for field work. When necessary, we organise public meetings and events to explain the background, objectives and local impacts of our research.

In the area of Sámi Homeland, we communicate our activities to local media, stakeholders and actors in the Sámi language most widely used in the region. In international projects, we may communicate jointly with our partners in the main language of the target area, in line with local needs and objectives.

6. Responsible operating practices

The Board of Directors appointed by the Government directs, monitors, and supervises the operations of the research institute. The duties, decision-making powers, and quorum of the Board of Directors are prescribed in a Government Decree.

The Director General, appointed by the Government, leads and develops the operations of the research institute and is responsible for the performance of the organisation and the achievement of its objectives to the Ministry of Economic Affairs and Employment. The Director General has overall responsibility for GTK's impact in line with the long-term objectives and the strategy decided by the Board of Directors. The Director General appoints a Management Group to support the management of GTK in accordance with the Director General's decisions, the rules of procedure and assigned management responsibilities.

GTK's governance structure consists of management responsibility areas that support the Director General's decision-making, as well as operative units responsible for operational activities. Operational activities comprise the responsibility areas of Availability of Raw Materials and Sustainable Use of the Environment, which together include seven operative units.

GTK is managed and guided in accordance with the approved strategy. In line with the principles of good governance, the management is committed to complying with jointly defined operating practices, which are described in the organisation's policies.

GTK's quality policy is based on the needs and satisfaction of key stakeholders, safeguarding the quality and usability of dataset assets and a commitment to the continuous improvement of operations and capabilities.

The risk management policy defines the principles, responsibilities, operating practices, and objectives related to GTK's risk management. Risk management is an integral part of the steering and management system, covering all operations and applied consistently across the organisation. We apply a risk management process in accordance with the SFS-ISO 31000 standard. Risk mapping of key areas at agency level is reviewed annually, and a description of the overall risk assessment is included as part of the performance agreement between GTK and the supervising ministry.

The objectives and operating principles of the policies are binding for all personnel. GTK's management oversees compliance with the operating practices set out in the policies. The management is also responsible for the development of policies and quality control, and monitors annually the progression of the objectives and targets of the quality, risk management and environmental policies through assessments and audits.

6.1 Good governance

We comply with the guidelines of the Finnish National Board on Research Integrity (TENK) on Responsible Conduct of Research (RCR) and the handling of alleged violations of the RCR. In 2025, no notifications of suspected violations of the Responsible Conduct of Research were submitted to the Director General of GTK.

We are committed to the national Declaration for Open Science and Research and to the related recommendations specifying open access to research publications. We encourage our researchers to publish their research results in publications that are significant in terms of impact and appropriate for the research theme. We promote openness in scientific publishing.

In the Open Science and Research (OSR) monitoring indicator, we reached level 3 in the 2024 assessment

round (scale 1–5). The assessment is conducted every two years. Our target for the 2026 assessment is level 4.

In 2025, we did not receive any notifications or complaints related to breaches of customer privacy or the inappropriate handling of customer data. The processing of customer data is described in our data protection statement.

The internal misconduct reporting channel ('whistleblower channel') is a tool available to our personnel for reporting misconduct and breaches as referred to in the Whistleblower Protection Act. In 2025, no reports were submitted through the whistleblower channel.

Statements and principles for issuing statements

GTK is an expert organisation that supports public authorities in decision-making by assessing, for example, the accuracy of permit applications submitted to authorities, environmental impact assessment (EIA) procedures, and draft legislation under preparation. Upon request, we issue statements on matters within our areas of expertise.

The matters on which statements are issued are typically related to the environmental impacts of planned activities. In addition, we provide statements on legislative initiatives and other development processes across administrative sectors. Under the Environmental Protection Act, GTK is designated as an expert body for issuing statements related to environmental permits. In accordance with the principles of good governance, we do not issue statements on matters for which we have carried out commercial projects.

In 2025, GTK received a total of 156 requests for statements, of which 60 concerned the field of geology and 18 were administrative matters. Statements in the field of geology were primarily related to mining activities, the construction of wind power and pumped-storage power plants, as well as land use and regional planning permitting processes. The number of requests for statements have stabilised at a higher level than in previous years (2024: 155; 2023: 136).

6.2 Sustainable procurement

Our objective is to ensure procurement that is socially, economically, and environmentally sustainable.

By a Government Resolution (10 September 2020), ministries have committed to implementing the objectives of the national procurement strategy within their own operations and administrative branches. As a government research institute, GTK has prepared an action plan to promote the objectives of the procurement strategy.

In the sustainability impact assessment (see chapter 3.2), emissions and human rights risks related to our procurement were assessed as material in terms of impact. Procurement may include potential negative impacts, such as increased greenhouse gas emissions or poor working conditions in international supply chains. Going forward, we will further assess the significance of these impacts and improve their monitoring.

Since 2024, we have strengthened our knowledge base and expertise related to the circular economy in procurement, which has been applied, for example, in the tendering process for the renewal project of the GTK Mintec pilot plant. We also continued the development of the feedback process for requests for tenders, taking sustainable development criteria into account.

In preparing GTK's operating model for sustainable procurement, we are piloting the EU Green Public Procurement (GPP) criteria to assess the environmental, social and economic sustainability of procurement. The collection of experiences from the use of the criteria is ongoing, and we aim to identify further ways to strengthen the integration of sustainability considerations into procurement practices.

Sustainability objectives for procurement

Progress on our sustainability objectives for procurement has not advanced over the past two years due to resource constraints. GTK set sustainability objectives and related indicators for procurement in 2021, and their progress was monitored annually in the sustainability report.

Due to limited resources, it is no longer justified to continue monitoring the progress of these objectives. In the near future, GTK does not have the capacity to

substantially advance separate sustainability objectives related to procurement.

Carbon footprint of procurement

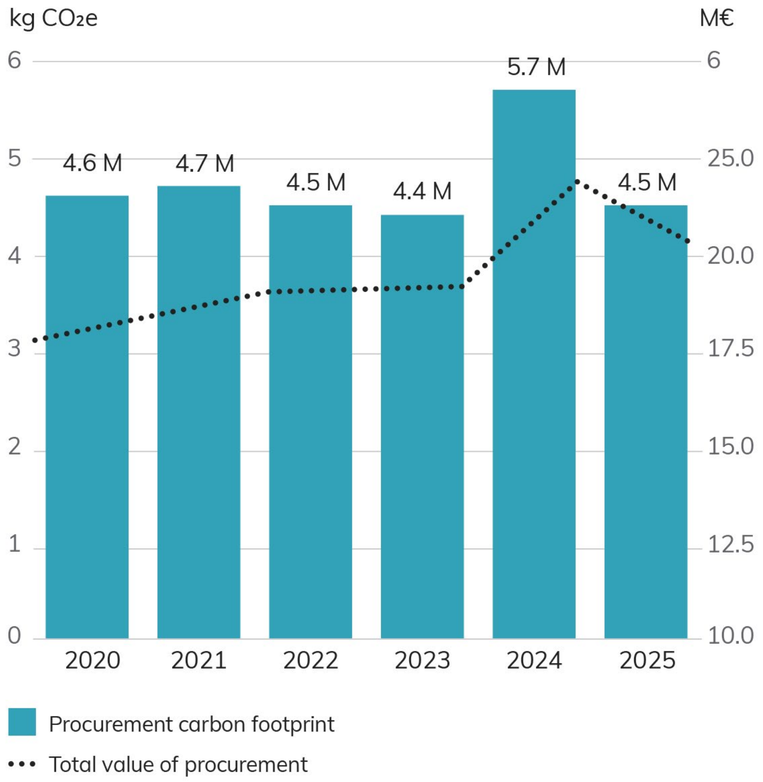
The assessment of the carbon footprint of our procurement is based on purchase invoices from 2025. Data on the value of our procurement and the estimated carbon footprint are sourced from the Hansel Hankintapulssi service.

The estimated carbon footprint of our procurement (kg CO_2e) was lower in 2025 (4.55 million) compared with the previous year (2024: 5.72 million), which is consistent with the decrease in the total value of procurement. Investments in premises and infrastructure have increased the carbon footprint of procurement in the short term, however, we expect it to decrease in the long term.

The total value of our procurement in 2025 amounted to EUR 20.68 million, compared with EUR 24.12 million in 2024. The decrease in total value was primarily due to a reduction in the purchase of services and the postponement of investments, particularly in relation to the renewal of the GTK Mintec pilot plant.

When interpreting the carbon footprint assessment of procurement, it should be noted that Hansel updated the emission factors underlying the carbon footprint calculations used in the Hankintapulssi service at the beginning of 2024. The carbon footprint assessment is now more accurate, but the update also affected carbon footprint figures retrospectively. As a result, figures reported for earlier years are not fully comparable with figures reported for 2023 onwards.

Carbon footprint of procurement, 2020–2025



6.3 Management of negative environmental impacts

GTK's research promotes the sustainable use of natural resources, nature restoration, and the management of environmental impacts related to industry and land use. Our research supports the green transition and the achievement of carbon neutrality targets both in Finland and through our international activities.

In the sustainability impact assessment (see chapter 3.2), our most significant environmental impacts were identified as the positive effects generated through scientific research and cooperation, particularly in relation to environmental status, pollution prevention, the clean energy transition, and the safeguarding of biodiversity.

Our most material adverse environmental impacts arise from emissions related to procurement and from activities that support land use and the utilisation of natural resources. Land use is the single most significant factor contributing to biodiversity loss. An increase in the exploration of primary raw materials and mining activities contributes to a higher overall carbon footprint of the extractive sector and to land-use-related impacts such as transport, drilling and construction.

Negative impacts also arise from GTK's own operations, including climate emissions related to employee travel and facilities. Energy consumption and the carbon

footprint of premises may have environmental impacts if work is carried out in older or energy inefficient facilities, leading to increased energy use and environmental burden.

We implement the objectives of GTK's environmental policy, and the principles set out in our Code of Conduct in the following ways:

- By complying with the common environmental objectives of central government.
- By maintaining and increasing environmental awareness among personnel.
- By taking environmental aspects into account in the direction of data collection, research activities and in services provided to customers.
- By directing purchased services to suppliers that are committed to operating in accordance with the practices required by GTK's environmental policy.
- By reducing the environmental burden arising from our own operations.

GTK participates in nature-positive work within central government

GTK was selected to participate in the Nature-Positive Government development programme coordinated by the Prime Minister's Office. The aim of the programme is to strengthen cooperation across central government to safeguard biodiversity and to create a model for nature-related work within central government.

The development programme was launched in autumn 2025 and will run for a year. As part of the programme, an organisation-specific Nature Work Development Plan will be prepared for GTK and five other organisations representing different administrative sectors. The plan will include, for example, indicators related to the assessment and monitoring of nature-related work.

Studies on the Kouvervaara drill pipes in Kuusamo completed

Follow-up studies of old drill pipes that discharge groundwater in the Kouvervaara area of Kuusamo were completed. Since 2019, GTK has studied the locations of the drill pipes and the quality of the discharged groundwater, as well as the quality of stream waters and sediments downstream of the drill pipes.

Higher concentrations of metals and elevated radionuclide activity were detected in stream sediments located near the drill pipes. However, based on the sediment samples, the higher concentrations of harmful substances were limited to the immediate vicinity of the drill pipes. No wider environmental contamination was observed. Elevated concentrations are also natural for the area. Concentrations of metals and radionuclides were found in sediment samples from springs and streams with natural background concentrations.

All drill pipes that discharge groundwater will be permanently sealed, and measures in the area will continue until 2027.

7. Report information and compilation

This sustainability report of the Geological Survey of Finland GTK has been compiled with reference to the Global Reporting Initiative (GRI) reporting standards and focuses on our most significant impacts on the environment, people and the economy.

The report was compiled in early 2026 and covers the year 2025. The information presented in this report has not been subject to external assurance.

GTK has reported on its sustainability performance since 2021. The sustainability report is produced annually. The objective of our reporting is to provide citizens, decision-makers, the research community, and the business sector with a consolidated overview of our research and services in advancing sustainable development.

This report is based on the information available at the time of its compilation.

8. GRI Content Index

General Disclosures

Code	Content	Location	Information	Standard version
Organisation and Its Reporting Practices				
2–1	Organisational details	4, 40 Geological Survey of Finland		2021
2–2	Entities included in the organisation's sustainability reporting	12, 40		2021
2–3	Reporting period, frequency and contact point	43 Contact		2021
2–4	Restatements of information		Changes reported with the relevant information.	2021
2–5	External assurance		The report has not been externally assured.	2021
Activities and Employees				
2–6	Activities, value chain and other business relationships	4, 5, 13. Tilinpäätös		2021
2–7	Employees	6		2021
Governance				
2–9	Governance structure and composition	40		2021
2–10	Nomination and selection of the highest governance body	40		2021
2–11	Chair of the highest governance body	40		2021
2–12	Role of the highest governance body in overseeing the management of impacts	12, 40		2021

General Disclosures

Code	Content	Location	Information	Standard version
2–13	Delegation of responsibility for managing impacts	12, 40		2021
2–14	Role of the highest governance body in sustainability reporting	12		2021
2–15	Conflicts of interest	14, 15, 40, 41 Code of Conduct		2021
2–16	Communication of critical concerns	12, 37, 39		2021
2–17	Collective knowledge of the highest governance body	12		2021
2–19	Remuneration policies	18 Non-Discrimination and Gender Equality Plan		2021
2–20	Process to determine remuneration	18 Non-Discrimination and Gender Equality Plan		2021
Strategy, Policies and Practices				
2–22	Statement on sustainable development strategy	3, 10, 11		2021
2–23	Policy commitments	4, 5, 8, 13, 14, 15, 23, 31, 40, 41 Code of Conduct		2021
2–24	Embedding policy commitments	40		2021
2–25	Processes to remediate negative impacts	10, 12, 14, 15, 21, 39, 40, 41, 42, 43		2021
2–26	Mechanisms for seeking advice and raising concerns	17, 18, 40, 41 Code of Conduct		2021
2–27	Compliance with laws and regulations	40 Geological Survey of Finland		2021
2–28	Membership associations	8, 23, 31, 40, 41		2021

General Disclosures

Code	Content	Location	Information	Standard version
Stakeholder Engagement				
2–29	Approach to stakeholder engagement	8, 39, 40, 41 Code of Conduct		2021
2–30	Collective bargaining agreements	37, 38 Collective Bargaining Agreements		2021
Material Topics				
3–1	Process to determine material topics	12, 14, 15, 43 Kestävyysraportti 2024		2021
3–2	List of material topics	12, 14, 15, 43		2021
3–3	Management of material topics	12, 14, 15, 43		2021

Economic Impacts

Code	Content	Location	Information	Standard version
Economic Performance				
201-2	Financial implications and other risks and opportunities due to climate change	7, 10, 12, 14, 15, 29, 30, 42, 43		2016
201-4	Financial assistance received from government	4, 7		2016
Indirect Economic Impacts				
203-1	Infrastructure investments and services supported	7, 9		2016
Anti-corruption				
205-2	Communication and training about anti-corruption policies and procedures	9, 40 Code of Conduct		2016
205-3	Confirmed incidents of corruption and actions taken	GRI content index	No cases	2016
Anti-competitive Behavior				
206–1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	GRI content index	No cases	2016

Environmental Impacts

Code	Content	Location	Information	Standard version
Energy				
302–1	Energy consumption within the organization	18, 42, 43 Environmental Policy		2016
302–4	Reduction of energy consumption	18, 42, 43 Environmental Policy		2016
Water and Effluents				
303–2	Management of water discharge-related impacts	42, 43 Environmental Policy		2018
303–4	Water discharge	42, 43 Environmental Policy		2016
Biodiversity				
304–2	Significant impacts of activities, products and services on biodiversity	7, 12, 13, 14, 15, 21, 42, 43		2016
Emissions				
305–5	Reduction of GHG emissions	18, 41, 42, 43 Environmental Policy		2016
Waste				
306–2	Management of significant waste-related impacts	42, 43 Environmental Policy		2020
Supplier Environmental Assessment				
308–1	New suppliers that were screened using environmental criteria	41, 42, 43 Code of Conduct		2016

Social Impacts

Code	Content	Location	Information	Standard version
Employment				
401–1	New employee hires and employee turnover	6		2016
Occupational Health and Safety				
403–1	Occupational health and safety management system	36, 37		2018
403–2	Hazard identification, risk assessment, and incident investigation	36, 37, 40		2018
403–3	Occupational health services	38, 39		2018
403–4	Worker participation, consultation, and communication on occupational health and safety	38, 39		2018
403-6	Promotion of worker health	17, 36, 38, 39		2018
403–9	Work-related injuries	17, 36, 37		2018
Training and Education				
404–2	Programs for upgrading employee skills and transition assistance programs	17, 38, 39		2016
404–3	Percentage of employees receiving regular performance and career development reviews	39		2016

Social Impacts

Code	Content	Location	Information	Standard version
Diversity and Equal Opportunity				
405–1	Diversity of governance bodies and employees	6, 12, 17, 37, 38 Non-Discrimination and Gender Equality Plan		2016
405–2	Ratio of basic salary and remuneration of women to men	17, 37, 38 Non-Discrimination and Gender Equality Plan		2016
Non-discrimination				
406–1	Incidents of discrimination and corrective actions taken	37, 38 Non-Discrimination and Gender Equality Plan Operational Non-Discrimination Plan		2016
Rights of Indigenous Peoples				
411–1	Incidents of violations involving rights of indigenous peoples	GRI Content Index	No cases	2016
Local Communities				
413–2	Operations with significant actual and potential negative impacts on local communities	12, 14, 15, 39		2016
Customer Privacy				
418–1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	40, 41 Code of Conduct		2016