GSMA

Material sustainability issues for the mobile sector

2023 Update

GSMA™

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About the authors:
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Contents

1.0 Introduction

Since 2017, the GSMA has conducted research on the sustainability issues that are most widely referenced in the materiality assessments of 28 of the largest mobile operators. This report constitutes the 2023 update of the most relevant sustainability issues, together with an overview of emerging trends. While a list of issues can never be exhaustive or represent the diversity of the mobile sector, it does provide a guide for the range of sustainability priorities faced by mobile operators.

Each GSMA member company included in this research will have used its own chosen method for conducting materiality assessments to determine its most significant and priority sustainability issues. Traditionally, most materiality assessments have mapped sustainability issues based on their priority to stakeholders and their potential business impact. However, this is evolving towards a double materiality approach[1].

Double materiality involves assessing both impact materiality and financial materiality. Impact materiality refers to a business's impact on people and the environment (sometimes referred to as 'outward impacts') and financial materiality refers to the financial implications of a sustainability issue for a business's financial performance and value (sometimes referred to as 'inward impacts'). A sustainability issue is considered to be material if it is assessed as such from the impact perspective, from the financial perspective or from both of these two perspectives.

This report can serve as one input for mobile operators' materiality assessments but should not replace a company-specific materiality assessment, involving stakeholder engagement as a critical element. In addition to direct stakeholder engagement through, for example, interviews and surveys, materiality assessments usually involve desk-research into reputable frameworks or initiatives that are guiding international action on sustainability issues, as well as expert opinion or approaches on local and global priorities.

1 For example, taking a double materiality approach is a requirement of the upcoming European Union Sustainability Reporting Directive. See Corporate sustainability reporting (europa.eu)

1.1 Methodology

For this report, the outputs from the materiality assessments of 28 GSMA members were reviewed, together with existing GSMA publications which address a broad selection or material sustainability issues, including:

- the GSMA *ESG Metrics for Mobile*[2];
- the salient human rights issues identified in GSMA's *Introduction to Human Rights by the Mobile Sector*[3];
- the previous 2021 list of responsibility issues as set out in GSMA's *The Journey to Responsible and Sustainable Leadership: Guide to Operating Responsibly*[4].

In addition to updating the list of most commonly referenced issues, the research also explored what emerging sustainability issues and trends mobile operators should be aware of. These were identified through both the review of GSMA member companies and an analysis of a selection of external resources, comprising of existing and upcoming reporting requirements, benchmarks and insight reports, as well as an analysis of materiality assessments of companies in other parts of the digital ecosystem (see section 4 for full list of sources).

How material or high priority a sustainability issue is for any individual mobile operator company is highly dependent on a range of factors such as size, operating geography, operating structure and external operating context. How these factors can influence the materiality of each issue is highlighted in this report where relevant.

2 ESG Metrics for Mobile, GSMA, 2022
3 An Introduction to Human Rights for the Mobile Sector, GSMA, 2020
4 The Journey to Responsible and Sustainable Leadership: Guide to Operating Responsibly, GSMA, 2021

1.2 Material Sustainability issues and definitions – summary

BUSINESS ETHICS

Complying with ethical and responsible business practices including policies, systems and controls to guide employee conduct.

Covers issues such as anti-bribery and corruption, fair competition, regulatory compliance, tax practices and transparency.

CIRCULAR ECONOMY

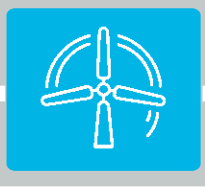
Efforts to move to a system where waste and pollution are eliminated and products, components or raw materials are kept in use.

Examples include repair, reuse and recycling of network equipment and devices, designing devices for repairability and recyclability and management of waste (including e-waste and hazardous waste).

CLIMATE CHANGE ADAPTATION

Managing and disclosing risks presented by climate change.

Disclosure of material risks arising from climate change under differing future climate scenarios, in alignment with TFCD[5] recommendations, includes resilience of assets to extreme weather.



CLIMATE CHANGE MITIGATION

Identifying and reducing the contribution to climate change. Primarily through energy efficiency, low-carbon energy generation, more sustainable transportation, supplier and customer engagement.

This includes reporting on Scope 1, 2 and 3 emissions and setting greenhouse gas emissions reduction targets in line with science-based impact scenarios.

CORPORATE GOVERNANCE

Robust governance and Board effectiveness.

This includes Board composition, executive compensation, risk and opportunity oversight, grievance mechanisms and stakeholder engagement. Governance of ESG matters and linking remuneration to ESG performance is also included.

5 Task Force on Climate-related Financial Disclosures (TCFD)

CUSTOMER SERVICE

Identifying and meeting the needs of customers.

Key aspects include customer satisfaction, company reputation, network quality and reliability, handling of customer complaints, treating vulnerable customers fairly (including those with disabilities) and incorporating customer feedback into innovation and company practices.

DIGITAL INCLUSION

Ensuring all members of society are able to access and use products and services, including the under-served.

Examples include ensuring affordable devices and data, delivering training and awareness-raising to support customers with lower levels of digital skills and confidence, and providing network coverage.

DIGITAL RIGHTS

Respecting and protecting customers' digital rights including freedom of expression.

Includes policies, processes and transparency mechanisms relating to privacy, freedom of expression, government mandates to shut down or restrict access to networks and services, and government data access requests.

DIVERSITY, EQUITY AND INCLUSION

Preventing discrimination and harassment and measuring, promoting and retaining a diverse workforce.

Examples include creating an inclusive environment and culture where everyone feels welcome and preventing discrimination in promotion, hiring, training and compensation based on age, gender identity, ethnic background, disability, religious persuasion, sexuality, race or other characteristics beyond the ability to conduct work.

HEALTH, SAFETY AND WELLBEING

Caring for employees and contractors to prevent accident or injury and supporting and promoting wellbeing in the workplace.

Examples include clear H&S Policy and management framework, monitoring and public reporting of H&S metrics in a way that enables comparison of performance over time, channels for reporting H&S concerns, and programmes in support of employee and contractor health, safety and wellbeing.

ONLINE SAFETY

Protecting children, young people and other vulnerable individuals from online harms.

Examples include tailored products such as handsets or services with limited functionality, parental controls, and providing children, parents and caregivers with advice and education to help build awareness and resilience, and to empower children and young people to lead safer lives online

PRIVACY, SECURITY AND DATA PROTECTION

Assuring customer privacy across services and operations by identifying risks relating to collection, retention and use of sensitive personal data, and building resilience into the systems and processes governing the data.

Examples include applying principles of privacy-by-design, security-by-design and accountability, establishing strong cyber security systems, undertaking impact and risk assessments, and using safeguards appropriate to the sensitivity of the user information held.

PRODUCTS AND SERVICES THAT BENEFIT SOCIETY AND THE ENVIRONMENT

The provision of products, services and solutions that deliver positive benefits for customers, the environment and society, including contributing to the Sustainable Development Goals (SDGs).

Examples include products and services that support education, health and financial inclusion or help to reduce greenhouse gas emissions.

RESPONSIBLE EMPLOYER

Protecting the rights of employees and talent attraction, development and retention.

Including specific reference to labour rights, creating opportunities for employees to realise their potential, providing training and development, attracting and retaining talent, offering fair remuneration and being responsive to changing working conditions created by digitalisation.

SUSTAINABLE SUPPLY CHAIN MANAGEMENT

Setting and applying standards for governance, human rights, labour practices, environment, fair operating practices, consumer issues and community involvement and development.

Supply chain human rights issues include working hours, pay, modern slavery, health and safety, child labour, sexual harassment, freedom of association, collective bargaining and responsible sourcing of minerals.

2.0 Sustainability issues for the mobile sector

This section outlines the updated material sustainability issues for the sector and for each issue, provides a high-level explanation of why the issue is material for the mobile sector and considers both the impact materiality and financial materiality perspectives. Where relevant, the issues are also mapped against GSMA's ESG Metrics for Mobile[6].

How material an issue is for a specific mobile operator will vary depending on a multitude of factors such as size, operating regions and countries, operating context, stakeholder concerns, ownership structure and level of outsourcing. Where relevant, how these factors may impact an issue's materiality are highlighted.

Business ethics

Complying with ethical and responsible business practices including policies, systems and controls to guide employee conduct.

Covers issues such as anti-bribery and corruption, fair competition, regulatory compliance, tax practices and transparency.

Illegal, unethical or irresponsible behaviour by companies, their employees and/or representatives can have wide-ranging implications for society. For example, corruption undermines politics and public trust and can impact local communities, human rights and the economy, as well as the cost of doing business.

Non-compliance with applicable laws and regulations relating to corruption, tax payments and competition may lead to fines, imprisonment and reputational damage and potentially have adverse effects on future growth prospects. Anti-bribery and corruption laws, such as the UK Bribery Act and US Foreign Corrupt Practices Act, extend obligations to many companies and individuals operating internationally.

There are geographical differences in terms of, for example, level of corruption risk (as highlighted by Transparency International's Corruption Perception Index[7]). Therefore, a mobile operator's operating context, including countries of operation, may impact how material an issue business ethics is for that company.

6 ESG Metrics for Mobile, GSMA, 2022
7 See 2021 Corruption Perceptions Index

Circular economy

Efforts to move to a system where waste and pollution are eliminated and products, components or raw materials are kept in use.

Examples include repair, reuse and recycling of network equipment and devices, designing devices for repairability and recyclability and management of waste (including e-waste and hazardous waste).

Humanity is currently using the equivalent of 1.75 Earths to provide the resources we use and to absorb our waste[8]. Not only will this result in the depletion of natural resources, but it also has wide-ranging direct impacts on people and nature through, for example, impacts of mining for new materials; contamination of land and water from waste disposal; and potentially harm to people handling waste or living in proximity to contamination if waste is not handled and disposed of responsibly.

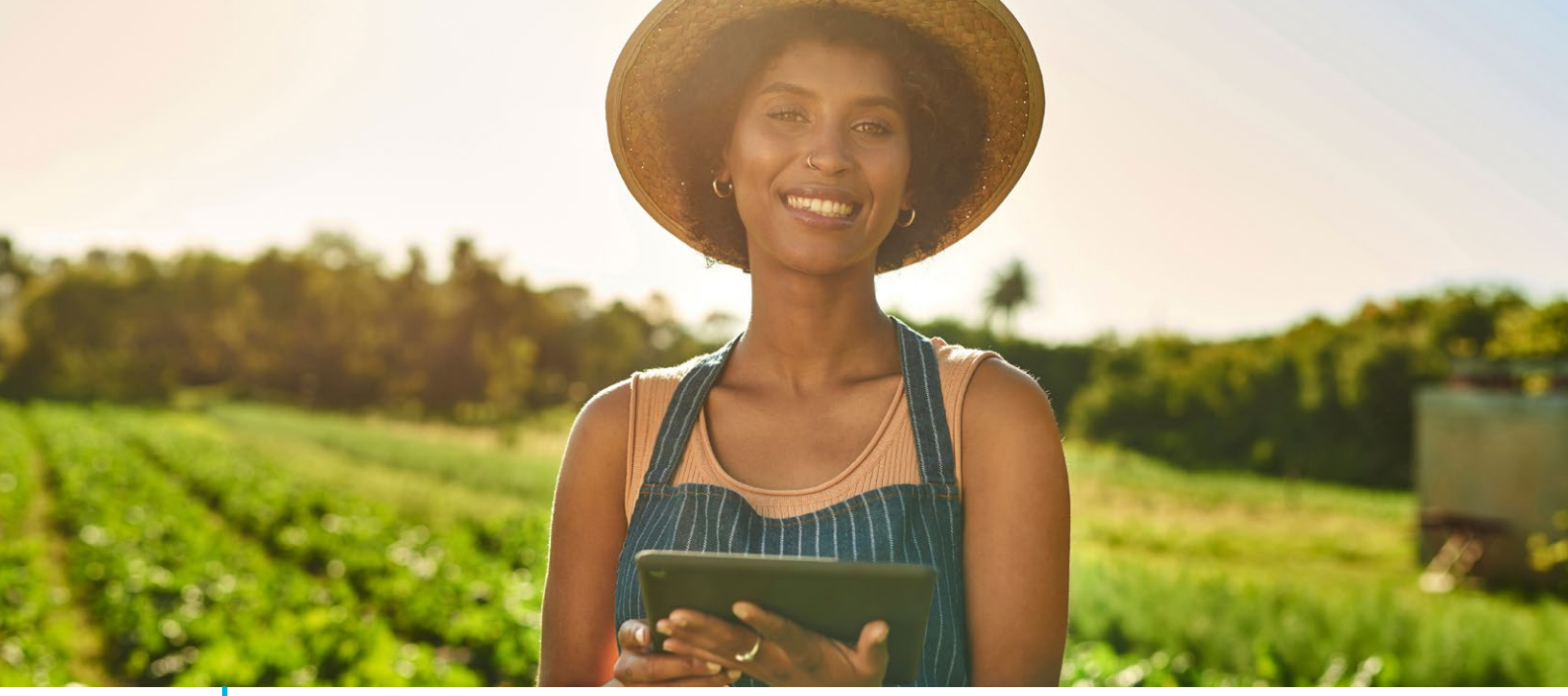
Electronic waste (or e-waste) is one of the fastest-growing waste streams in the world. In many countries, e-waste recycling laws mandating that both electronics retailers and manufacturers create a system for the recycling, reuse or proper disposal of waste are in place. These may include requirements for companies to finance collection, recycling and disposal of different waste streams, with penalties for failure to meet obligations. There is also potential to save costs or generate revenues from refurbishing and reusing equipment and devices.

Regulatory frameworks as well as the scale and maturity of infrastructure for handling waste vary regionally, which may impact the materiality of this issue for mobile operators depending on where they operate.

Circular Economy Strategy Papers

In 2022, the GSMA published two strategy papers on the Circular Economy. The first was focused on network equipment[9], recognising that rapid technological changes and accompanying customer behaviours shorten network equipment lifecycles, resulting in greater production and increasing waste. The second strategy paper focused on the largest environmental impact of the mobile industry from customers accessing connectivity through connected devices[10].

8 Living Planet Report 2022, WWF, 2022
9 GSMA | Strategy Paper for Circular Economy: Network equipment - #BetterFuture, GSMA, 2022
10 GSMA | Strategy Paper for Circular Economy: Mobile devices - #BetterFuture, GSMA, 2022



Climate change adaptation

Managing and disclosing risks presented by climate change.

Disclosure of material risks arising from climate change under differing future climate scenarios, in alignment with TFCD recommendations, includes resilience of assets to extreme weather.

As the scale and frequency of extreme weather events associated with climate change (such as extreme heat, wildfires, flooding and storms) increases, mobile operators will face growing threats to their physical infrastructure and business continuity.

Mobile operators provide critical infrastructure relied upon by individuals, business and wider society and any service interruptions resulting from damage to this equipment can have significant impacts on people and the economy. Such interruptions to service can also lead to reduced revenues for operators, as well as potentially increased costs to repair equipment damaged by the weather. The nature and scale of these extreme weather events, as well as the associated human and economic costs, varies geographically but nowhere will be immune from impacts from a changing climate.

In addition to these physical risks, operators may also face transition risks from, for example, new climate-related policy and regulations, market changes (such as the cost of raw materials) and reputational risks. Operators that identify and prepare for climate-related risks – taking into account the specific circumstances of their countries of operation – will have more resilient infrastructure and reduced exposure to these risks.

A growing number of countries and regions have introduced mandatory requirements for the reporting of climate-related risks or have indicated that they will. This builds on growing investor expectations, the work of the Task Force on Climate-related Financial Disclosures (TCFD)[11] and reporting initiatives such as the Sustainability Accounting Standards Board[12].

11 See Task Force on Climate-Related Financial Disclosures | TCFD) (fsb-tcfd.org)
12 See SASB

Climate change mitigation

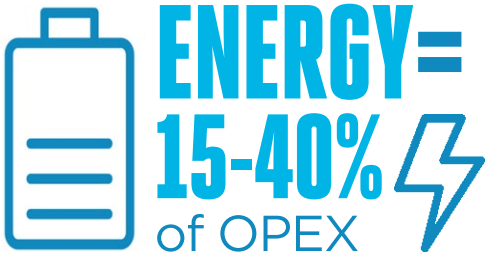
Identifying and reducing the contribution to climate change, primarily through energy efficiency, low-carbon energy generation, more sustainable transportation, supplier and customer engagement, and investment in carbon credits.

This includes reporting on energy consumption, Scope 1, 2 and 3 emissions and setting greenhouse gas emissions reduction targets in line with science-based impact scenarios.

Climate change is one of the greatest threats humanity has ever faced, with wide-ranging consequences for people and nature all across the world.

Mobile operators contribute to global greenhouse gas emissions through, among other things, the consumption of significant amounts of energy to power network infrastructure as well as data centres, offices, transportation and indirect emissions in the value chain (Scope 3). Energy is a significant operating cost for mobile operators: 15–40 per cent of OPEX[13].

Ever-increasing demand for data, changing energy prices and supply, the introduction of carbon pricing and other regulatory requirements all have the potential to increase costs for operators. The way in which companies reduce their greenhouse gas emissions – for example, managing energy efficiency and using low-carbon energy generation – is also a high priority for many stakeholders, including investors.



GSMA ESG Metrics for Mobile

EMISSIONS:

- Science-based target
- Scope 1, 2 and 3 emissions

ENERGY:

- Energy consumption

13 Mobile-Net-Zero-State-of-the-Industry-on-Climate-Action.pdf, GSMA, 2021

Corporate governance

Robust governance and Board effectiveness.

This includes Board composition, executive compensation, risk and opportunity oversight, grievance mechanisms and stakeholder engagement. Governance of sustainability issues and linking remuneration to ESG performance is also included.

Effective corporate governance and board oversight are essential for business success and the robust management of – and progress on – all sustainability issues. Within this, effective stakeholder engagement and accessible grievance mechanisms are critical for all stakeholders to be able to make companies aware of how company operations may be impacting the environment, people and their human rights. These mechanisms help ensure that stakeholders feel they are being listened to; that their experiences and views are being addressed; and that remedy can be accessed.

Customer service

Identifying and meeting the needs of customers.

Key aspects include customer satisfaction, company reputation, network quality and reliability, handling of customer complaints, treating vulnerable customers fairly (including those with disabilities) and incorporating customer feedback into innovation and company practices.

As mobile becomes more ubiquitous, customers increasingly depend on mobile services for many aspects of their daily lives. This means that some of the most important issues for customers are being able to fully rely on and trust their service and easily and quickly access the support they need for any issues. Customer service – including network reliability and quality – is a key differentiator for mobile operators, impacting customer acquisition, retention and satisfaction, operating costs, revenues and market share.

95%
of the world's population
is covered by mobile broadband networks

Digital inclusion

Ensuring all members of society are able to access and use products and services, including the under-served.

Examples include ensuring affordable devices and data, delivering training and awareness-raising to support customers with lower levels of digital skills and confidence, and providing network coverage.

By increasing digital inclusion, mobile operators can have a significant positive impact for customers and society. Customers want and need reliable and affordable connectivity to communicate, earn an income and access life-enhancing services such as education, health and financial services. Approximately, 95% of the world's population is covered by mobile broadband networks. However, a lack of literacy, digital skills and affordability (particularly of handsets) remain key barriers to mobile internet adoption for millions of consumers.

Although there are people experiencing digital exclusion in all countries, there are significant regional differences relating to mobile coverage and other barriers to mobile internet adoption. Approximately 94% of the unconnected around the world are living in Low and Middle-Income Countries (LMICs). Sub-Saharan Africa has the largest coverage gap at 17% and a usage gap – those living in areas with a mobile broadband network but not using mobile internet – at 61%[14].

Providing mobile connectivity is at the core of operators' business models, strategies and revenues and requires continuous investment to meet the growing demand for mobile services from businesses and consumers. In many markets, operators also face regulatory requirements in relation to coverage and digital inclusion (for example, universal service obligations/funds).

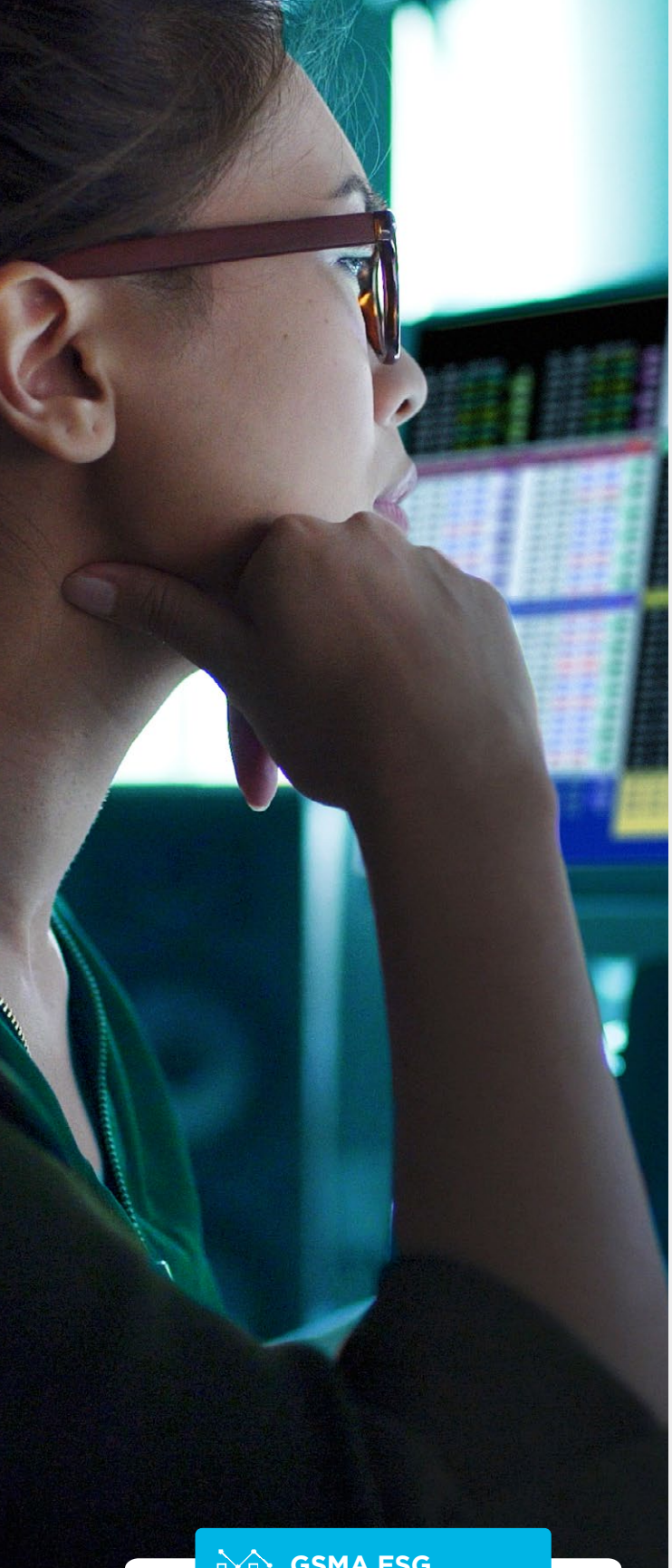
GSMA ESG Metrics for Mobile

NETWORK COVERAGE:
- Population covered by mobile network

AFFORDABILITY:
- Device and data affordability

DIGITAL SKILLS:
- Digital skills programmes

14 The State of Mobile Internet Connectivity Report 2022, GSMA, 2022



Digital rights

Respecting and protecting customers' digital rights including freedom of expression.

Includes policies, processes and transparency mechanisms relating to privacy, freedom of expression, government mandates to shut down or restrict access to networks and services and government data access requests.

Operators are often subject to a range of laws and/or licence conditions that require them to support law enforcement and security activities in countries where they operate. These requirements vary from country to country. In some countries, there is a lack of clarity in the legal frameworks governing this support which can create complex challenges for operators.

Orders to restrict services or even shut down or restrict access to the entire network can have serious consequences. For example, national security can be undermined if powers are misused and public safety can be endangered if citizens are unable to contact the emergency services. Individuals and businesses may be unable to carry out financial transactions such as paying friends, suppliers or salaries. Freedom of expression, freedom of assembly, freedom to conduct business, the right to privacy and other human rights can also be impacted.

Additional serious impacts for operators include financial losses from the suspension of services, reputational damage, staff safety issues when faced with pressure from the authorities and possibly even public retaliation.

GSMA ESG Metrics for Mobile

DIGITAL RIGHTS:

- Digital rights policy

Diversity, equity and inclusion

Preventing discrimination and harassment and measuring, promoting and retaining a diverse workforce.

Examples include creating an inclusive environment and culture where everyone feels welcome and preventing discrimination in promotion, hiring, training and compensation based on age, gender identity, ethnic background, disability, religious persuasion, sexuality, race or other characteristics beyond the ability to conduct work.

A company's ability to attract and retain a diverse workforce maximises its access to talent and an inclusive environment and culture within a company allows everyone to thrive and contribute. There is growing evidence that companies that embrace diversity and inclusion outperform their peers[15].

However, millions of people do suffer from discrimination and unequal pay in the workplace[16]. This may involve, for example, being denied access to jobs, promotions or training or receiving lower wages on the basis of personal attributes.

The majority of countries around the world have legislation in place that prohibits discrimination in the workplace and elimination of discrimination is one of the ILO's fundamental principles and rights at work[17]. Discriminatory practices are a violation of human rights and may result in legal non-compliance leading to lawsuits, fines and other penalties, as well as reputation impact.

New initiatives[18] and requirements continue to be introduced with the objective of increasing diversity within companies. These are predominantly gender-focused (for example, the planned European Union Women on Boards[19] and Pay Transparency[20] Directives).

Momentum relating to women on boards is also building beyond Europe with, for example, the introduction of the Malaysian Code on Corporate Governance[21] requiring 30% women on boards and Korea's and India's requirement to appoint at least one woman to boards.

There are also legal disclosure requirements which extend beyond gender. For example, in the USA, companies are required to report data about employee gender, ethnicity and race on an annual basis to the US Equal Employment Opportunities Commission[22]. Leading company diversity and inclusion programmes are taking a broad scope beyond gender to also consider attributes such as age and disability and are increasingly looking at shifting retention practices to ensure that a more diverse workforce is supported with a greater focus on inclusivity (which is not necessarily always the case).

GSMA ESG Metrics for Mobile

DIGITAL RIGHTS:

- Digital rights policy

15 Diversity wins: How inclusion matters, McKinsey & Company, 2020
16 See International Labour Standards on Equality of opportunity and treatment (ilo.org)
17 See ILO Declaration on Fundamental Principles and Rights at Work (DECLARATION)
18 For example, the UN Women's Empowerment Principles
19 See Parliament approves landmark rules to boost gender equality on corporate boards | News | European Parliament (europa.eu)
20 See Gender pay gap: Parliament backs binding pay-transparency measures | News | European Parliament (europa.eu)
21 See 30% women representation on boards stressed in revised code for institutional investors | The Edge Markets
22 See EEO Data Collections | U.S. Equal Employment Opportunity Commission (eeoc.gov) Worker wellbeing and workplace performance UK Government

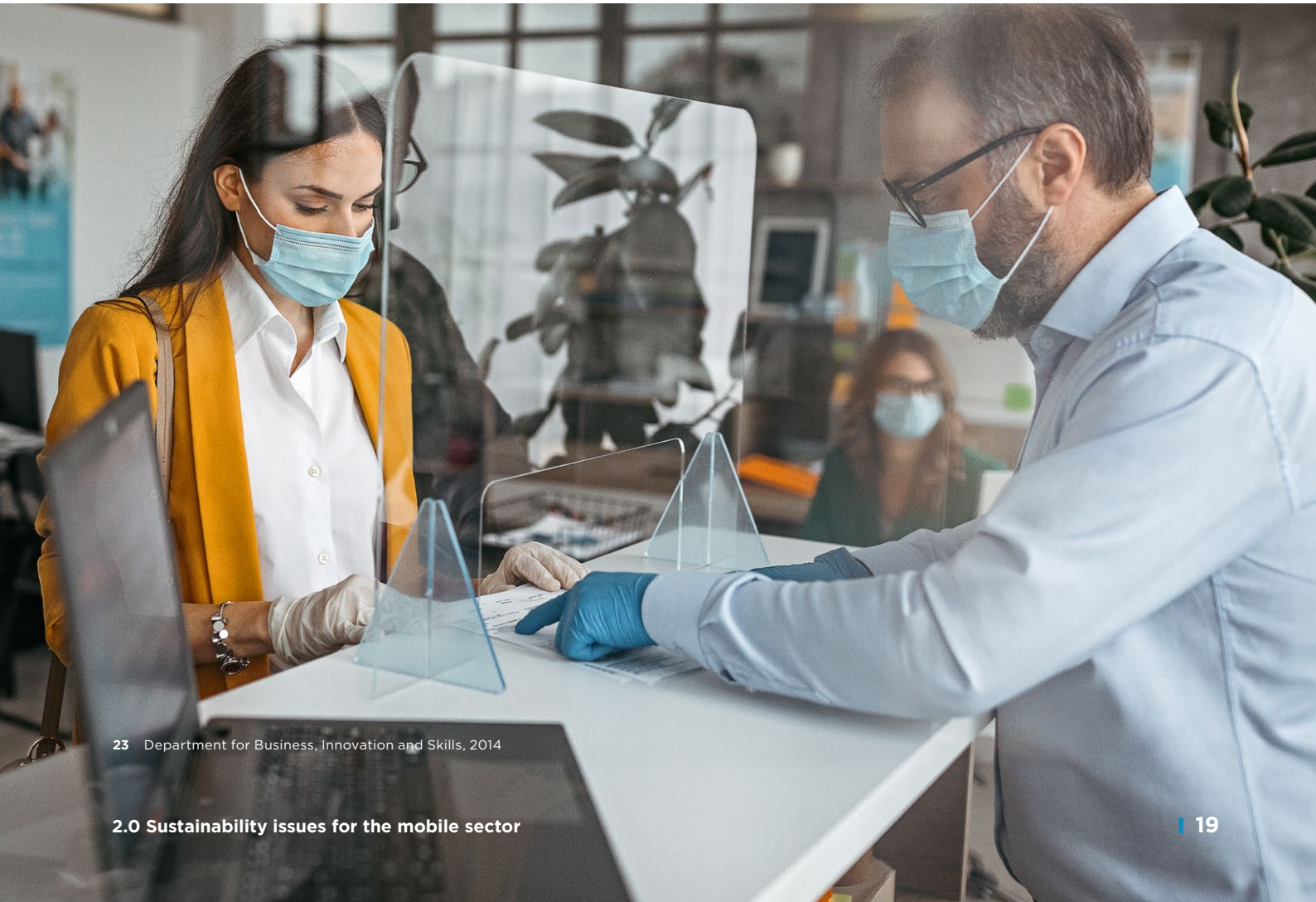
Health, safety and wellbeing

Caring for employees and contractors to prevent accident or injury and support and promote wellbeing in the workplace.

Examples include clear H&S Policy and management framework, monitoring and public reporting of H&S metrics in a way that enables comparison of performance over time, channels for reporting H&S concerns, and programmes in support of employee and contractor health, safety and wellbeing.

Employees and contractors can be injured or even die as a result of work-related accidents. This not only has significant consequences for the individual(s) involved, but also their family, friends, colleagues and wider community. There are also potential operational, financial and reputational impacts for businesses. Health and safety risks for mobile network operations include, for example, working at height, electrical work and driving and road safety. The level of risk can vary depending on things such as operating context, level of outsourcing and the scale of network deployment activities.

Supporting and promoting employee wellbeing can also benefit employees' physical and mental health. There is evidence of a correlation between workplace wellbeing and job performance through, for example, increased creativity and problem solving, higher output and fewer sick days[23].



23 Department for Business, Innovation and Skills, 2014

GSMA ESG Metrics for Mobile

ONLINE SAFETY:

- Online safety measures

Online safety

Protecting children, young people and other vulnerable individuals from online harms.

Examples include tailored products such as handsets or services with limited functionality, parental controls, providing children, parents and caregivers with advice and education to help build awareness and resilience, and empowering children and young people to lead safer lives online.

For growing numbers of young people, mobile technology is an important tool for communicating, accessing information, enjoying entertainment, learning, playing and being creative. The digital environment opens up new opportunities for the realisation of childrens' rights[24]. However, it also poses risks to children, who can be more vulnerable than adults and therefore require special safeguards and care.

Harms to children in the online world can be significant and long-lasting. Risks of online harm arise when a child[25]:

- engages with and/or is exposed to potentially harmful content;
- experiences and/or is targeted by potentially harmful contact;
- witnesses, participates in and/or is a victim of potentially harmful conduct;
- is exploited as a consumer in the digital economy.

Customers and other stakeholders, such as child rights advocates and some investors, expect mobile operators, as players within the broader online ecosystem, to contribute to helping to address these online risks and harms. This can involve, for example, working to combat online child sexual abuse content; supporting parents and children with online safety guidance; implementing acceptable use policies and reporting mechanisms, making parental control tools available; and supporting wider initiatives such as child helplines.

24 See mPower Youth Index, GSMA
25 Children in the digital environment: Revised typology of risks, OECD, 2021

Privacy, security and data protection

Assuring customer privacy across services and operations by identifying risks relating to collection, retention and use of sensitive personal data, and building resilience into the systems and processes governing data.

Examples include applying principles of privacy-by-design, security-by-design and accountability, establishing strong cyber security systems, undertaking impact and risk assessments, and using safeguards appropriate to the sensitivity of the user information held.

Operators collect, retain and use personal information in order to provide customers with products and services, to meet legal and regulatory obligations, and for other legitimate business reasons. It is vital that the millions of people and organisations who share information with operators and over mobile networks can trust mobile services and use them safely and securely.

As data volumes continue to grow rapidly, customers are concerned about their privacy and how their personal information may be accessed and misused (for example, by fraudsters). Customer privacy may also be threatened by the excessive and/or unauthorised collection, directly or indirectly without consent, and removing customer choice about how their personal data is used.

Regulatory requirements and scrutiny are increasing, with new data protection laws expected in 2023 in several markets including India, Nigeria, Pakistan and Tanzania[26]. In many countries, non-compliance with data protection laws can result in significant fines and penalties.

Security incidents – whether from, for example, criminals targeting network systems through malware or data leakages by employees misled by criminals – can also have major reputational and financial impacts for operators, impacting customer acquisition and retention.

The Mobile Privacy Principles

Working through the GSMA, the mobile industry has developed the Mobile Privacy Principles[27] which describe the way in which privacy should be respected and protected when consumers use mobile applications and services that access, use or collect their personal information. They are not intended to replace or supersede applicable law, but are based on recognised and internationally accepted principles on privacy and data protection. The key overarching objective of these principles is to foster business practices and standards that deliver meaningful transparency, notice, choice and control for mobile users with regards to their personal information and the safeguarding of their privacy.

26 The Year Ahead in Digital Policy: Proliferation of Data Protection Laws Continues, with Children's Privacy Going Mainstream, GSMA, 2023
27 GSMA | Mobile Privacy Principles | Public Policy, GSMA, 2016 Deep Dive: State of the Industry Report on Mobile Money 2022, GSMA, 2022

Products and services that benefit society and the environment

The provision of products, services and solutions that deliver positive benefits for customers, the environment and society, including contributing to the Sustainable Development Goals (SDGs).

Examples include products and services that support education, health and financial inclusion or help to reduce greenhouse gas emissions.

There are a wide range of examples of mobile operator products and services that have positive impacts on people and the environment. For example, mobile money has grown into a global financial service connecting more than a billion people to the formal economy and improving lives and financial security[28]. Smart technology such as connected grid technology and smart meters is helping other sectors to reduce their carbon emissions and could contribute 40% of the required carbon emissions savings for the world's net zero goals[29]. Artificial Intelligence (AI) and Mobile Big Data (MBD) are also being used to address some of the biggest challenges facing the world, such as the COVID-19 pandemic[30] and climate change[31]. These innovations need to be designed, developed and deployed in a responsible and ethical way that is human-centric and rights-oriented (see responsible and ethical innovation, page 31).

Such products and services are a significant and growing part of mobile operators' business models, contributing to revenues and growth. Operators can also enhance their relationships and reputation with a wide range of stakeholders, including governments, by developing services that address pressing social and environmental needs.

28 Deep Dive: State of the Industry Report on Mobile Money 2022, GSMA, 2022
29 GSMA Urges Industry Leaders to Scale Existing Smart Tech in the Race to Net Zero, GSMA, 2021
30 GSMA | AI for Impact: Mobile Big Data Analytics to combat challenges including COVID-19 - #BetterFuture, GSMA, 2020
31 GSMA | AI for Impact: Using the power of data to respond to climate change - #BetterFuture, GSMA, 2022

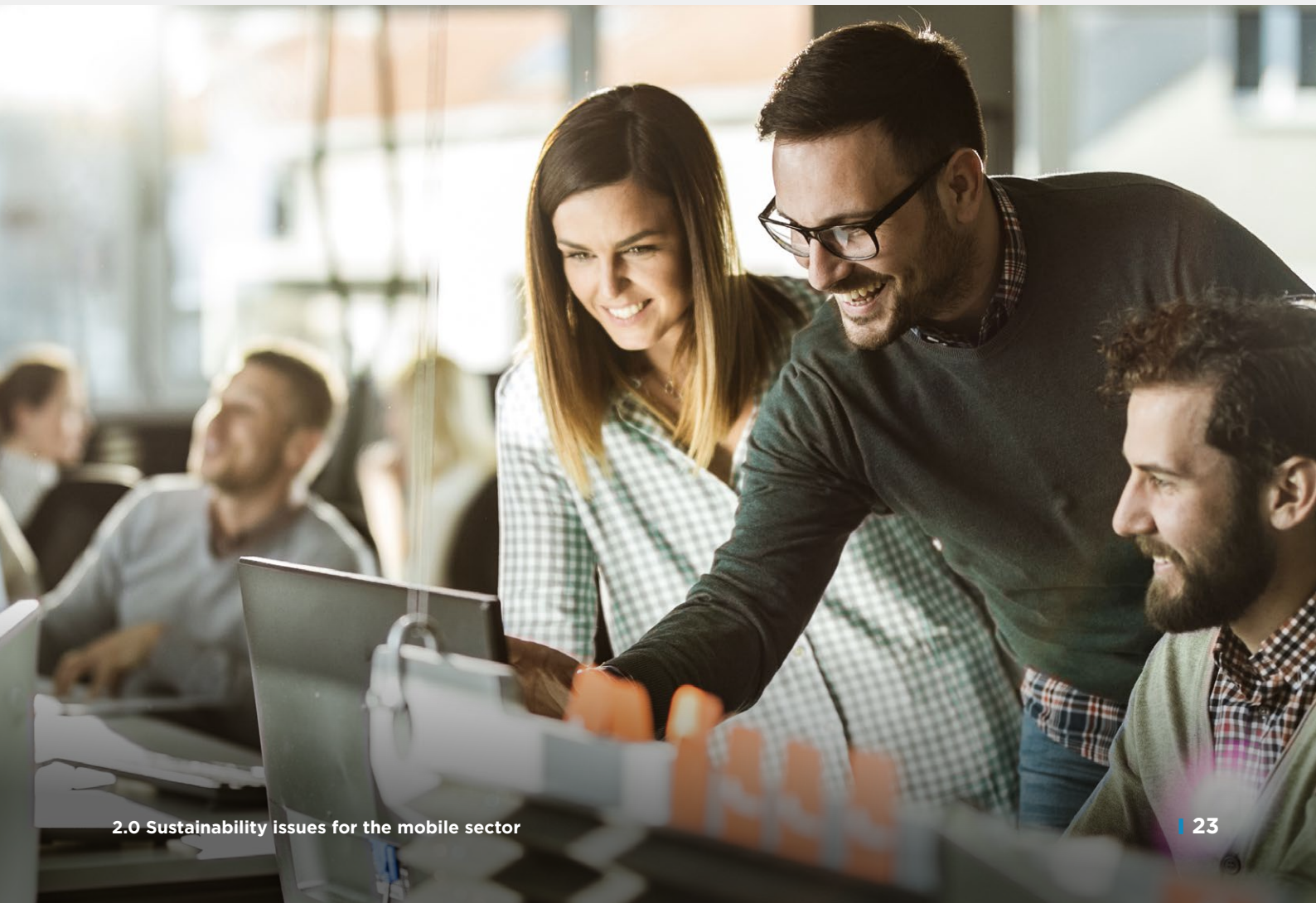
Responsible employer

Protecting the rights of employees and talent attraction, development and retention.

Including specific reference to labour rights, creating opportunities for employees to realise their potential, providing training and development, attracting and retaining talent, offering fair remuneration and being responsive to changing working conditions created by digitalisation.

Mobile operators rely on thousands of employees working in a wide range of different roles and company success is closely linked to the knowledge, experience and engagement of its staff.

Failure to be a responsible employer can have negative impacts on employees themselves and employee expectations are shifting rapidly in a post-COVID-19 world (see section 3). Respecting employee rights, supporting their wellbeing and offering them opportunities to develop has a positive impact on employee engagement and the ability of companies to attract, recruit and retain talent. This is particularly critical when there is talent shortage (for example, in highly skilled and/or technical roles).



Sustainable supply chain management

Setting and applying standards for governance, human rights, labour practices, environment, fair operating practices, consumer issues and community involvement and development.

Supply chain human rights issues include working hours, pay, modern slavery, health and safety, child labour, sexual harassment, freedom of association, collective bargaining and responsible sourcing of minerals.

Mobile operators' suppliers range from SMEs providing services to local offices through to large, global companies manufacturing network equipment and electronic devices. The supply chain for this purchased equipment is complex, with multiple tiers and thousands of workers across different countries.

Within their supply chains, companies face risks of illegal or unethical behaviour as well as low environmental standards and poor treatment of workers, including labour rights violations. This can result in a wide range of potential negative impacts for workers, their families and local communities.

If poor practices come to light, it is often the well-recognised, large brands at the 'top' of the supply chain that face the greatest reputational damage and may also be the focus of campaign groups and those impacted by poor practices to seek remedy (through, for example, lawsuits and the OECD National Contact Point complaints process). Mandatory requirements for company human rights and environmental supply chain due diligence and disclosure are increasing, particularly in Europe but also Australia and the USA. Examples include the German Due Diligence in Supply Chain Act, the Norwegian Transparency Act, the Australian Modern Slavery Act and the Californian Transparency in Supply Chains Act. The European Union is also developing a Corporate Sustainability Due Diligence Directive[32].

Human rights guidance for the mobile industry

GSMA's human rights guidance provides an introduction to some of the key human rights issues for mobile operators as well as case studies and resources to support GSMA members to develop and strengthen their human rights programmes. It focuses on privacy and freedom of expression, child rights and safety online, child labour, forced labour and human trafficking, conflict minerals and community impacts from building and maintaining infrastructure.

32 As of February 2023, this Directive is still being finalised.

3.0 Themes to watch

As well as updating the current list of material issues for the mobile sector, the review of GSMA members' materiality assessments also sought to identify new and emerging sustainability and ESG trends and issues. This research was complemented, as outlined in the methodology, by a review of a selection of external sources. This chapter outlines the key findings covering both emerging issues as well as issues that mobile operators may already be considering, but which are becoming increasingly prominent or where new aspects are garnering attention.

As is often the case with sustainability, there are strong interlinkages between these issues and especially in relation to those that demand major transitions that impact both people and the environment (for example, the transition needed to respond to the threat of climate change).

Similar to the approach taken in Chapter 2, each issue's section below sets out why it may be material for mobile operators from an impact and financial perspective.

Alignment of advocacy practices and sustainability commitments

In addition to expectations relating to responsible practices in how companies seek to influence public policy, the external sources reviewed for this report point to increased scrutiny on how companies align their advocacy practices with their sustainability and ethical commitments.

Although a number of operators make reference to public policy practice and advocacy efforts in their materiality assessments (and this may be incorporated into wider business ethics), there is no explicit mention of alignment between advocacy practices and sustainability commitments. Ensuring political engagement does not run counter to company's sustainability objectives is particularly highlighted in the context of the USA where companies have been under scrutiny (for example, in connection to supporting LGBTQ Pride while financially backing anti-LGBTQ politicians).

Biodiversity

With an estimated one million plant and animal species at risk of extinction by 2050[33], understanding and mitigating nature-related risks – including business impacts on biodiversity – is high on the agenda of many key stakeholders. Mobile operators can cause or be linked to biodiversity-related impacts across the value chain, including the sourcing of raw materials needed to manufacture goods, impacts on land from network infrastructure or sites and potential contamination from waste disposal.

For mobile operators, potential impacts on biodiversity should be considered in relation to site planning, network deployment and operations alongside issues such as community impacts, land rights and use. Although the size of individual sites is small relative to (for example) large-scale infrastructure developments such as power plants, habitats and species can still be impacted and particularly on green-field sites. These impacts are likely to be more material for operators with a high number of rural sites and those operating in ecosystems with high biodiversity importance.

Investor interest in nature-related risks is growing fast[34], with new investor-driven initiatives launched in December 2022 at COP 15 on Biodiversity[35]. A taskforce similar to the TCFD, which is mandatory for many listed companies, has also been introduced and this focusses on nature-related financial disclosures (TNFD)[36]. Companies that need to comply with the new EU Corporate Sustainability Reporting Directive (CSRD) will need to report on their biodiversity impacts as part of mandatory sector-agnostic reporting requirements[37]. Importantly, both the TNFD and CSRD require companies to think about biodiversity impacts across the full value chain, bringing into scope issues such as the responsible sourcing of minerals.

This research found that biodiversity is referenced in a small number of the materiality matrices reviewed – four mobile operators in total, three of which operate in low- and middle-income countries. It is not being assessed as highly material so far, and there is only limited disclosure by operators or their suppliers on biodiversity impacts and management.

1 MILLION

plant and animal species at risk of extinction

BY 2050

33 Living Planet Report 2022, WWF
34 'Why Is Wall Street So Hot for Biodiversity Right Now?' Eric Roston, Bloomberg, December 15, 2023
35 See: www.natureaction100.org
36 See Taskforce on Nature-related Financial Disclosures
37 EFRAG: Draft ESRS Exposure Drafts and Set of Basis for conclusions, 2022

Changing employee expectations

COVID-19 has had a lasting impact on employee expectations. As competition for talent continues to increase, companies need to learn how best to navigate these changing expectations to secure the best talent.

According to research by McKinsey, the top four employee expectations in the post-COVID-19 world are work-life balance, flexibility, clear workplace policies and increased company focus on mental health[38]. MSCI is predicting a rise in employment costs as employers will need to offer higher salaries and introduce various new benefits to attract talent[39]. At the same time, there is a global shortage of tech workers as digitalisation of economies progresses[40]. Employee attraction and retention are unsurprisingly found in the materiality assessments of most operators reviewed, and their importance is likely to continue to increase along with an evolution in the way in which companies need to respond.

Data-driven business models and targeted advertising

As more operators leverage how Mobile Big Data can help address societal issues and introduce additional revenue sources (by offering more personalised customer experiences, for example), the significance of data protection, privacy and security will increase, as will demand for transparency on what data is collected and how it is used for commercial purposes.

To diversify their service offer, bring more personalised experiences to customers and drive efficiency, mobile operators are developing new data-driven solutions[41]. For example, the use of data by operators for targeted advertising purposes such as location-based ads, personalised TV advertising or in data analytics-based B2B solutions were highlighted in the 2022 Ranking Digital Rights report[42]. The resulting expectation is for operators to carry out human rights impact assessments of these and other data-based services and solutions.

Most operators reviewed for this report already assess privacy, data protection and cyber-security as highly material, but new commercial uses of customer data have the potential to increase and change impacts, add new risks and drive greater scrutiny.

38 Four things workers want implemented by their bosses post-pandemic, World Economic Forum, 2021
39 ESG and Climate Trends to Watch for 2023, MSCI, 2022
40 Larry English: 'The Tech Talent War Has No End In Sight. Here's What You Need To Know', Forbes, June 1, 2021; Straits Times: 'Massive shortage of tech talent looms as Asia takes to digitalisation', Nov 5, 2021
41 How Telecommunications Companies Can Transform Into Data-Driven Businesses, Einaras von Gravrock, Forbes, March 10, 2022
42 See Ranking Digital Rights 2022

Network disruptions and disaster response

Mobile operators are the providers of critical infrastructure that our increasingly digitalised societies depend on. Disruption to services will have an expanding range of impacts on customer as they depend on mobile to work, learn and stay connected to loved ones. Robust disaster response processes are crucial to respond quickly to natural disasters such as earthquakes, hurricanes and floods. More frequent extreme weather events as a result of climate change increase the likelihood of such network disruptions.

Organisations focusing on the business impacts of ESG issues and performance, such as the IFRS Sustainability Disclosure Taxonomy[43] and SASB[44], raise network disruptions and time of recovery of services as key indicators for operators to disclose – beyond quality-of-service-type regulatory requirements.

Eight operators from four continents included disaster response and service resilience in their materiality matrices or lists, signalling the global nature of the challenge. How material this issue is for a mobile operator will be dependent on the vulnerability of its operating environment to climate change-related weather events and other natural disasters.

Robust disaster response processes are crucial

43 See IFRS Sustainability Disclosure Taxonomy, IFRS, 2022
44 SASB: Telecommunications Services

E-WASTE RECYCLING

programmes could reduce demand for mined cobalt by

35%

Resource use and material scarcity

Demand for many of the raw materials that mobile devices and network equipment depend upon is forecast to continue to grow, particularly those that are critical for the clean energy transition such as cobalt (which is used in batteries)[45]. In addition to the financial risks relating to material scarcity and its potential to impact supply of components critical to providing mobile connectivity, there are opportunities for positive impact through circular solutions.

Some external sources reviewed as part of this research emphasise the importance of joint efforts between companies in different parts of the value chain to seek more circular approaches and reduce the demand of virgin materials. According to research by MSCI, "e-waste recycling programs could reduce the projected 2040 demand for mined cobalt by 35%"[46]. For mobile operators, this calls for collaboration with key partners like equipment vendors and device manufacturers to collect, repair, resell and recycle devices and equipment. Ericsson highlights in its 2021 Sustainability report the need to work with customers to ensure e-waste is collected and can enter their take-back programmes[47].

Eight of the operators reviewed already include the topic of efficient resource use in the outputs from their materiality assessments and closely link it to both circular economy and climate impact. However, raw material scarcity is not explicitly referenced.

45 Total cobalt demand by sector and scenario, 2020-2040, International Energy Agency, October 26,2022
46 ESG and Climate Trends to Watch for 2023, MSCI, 2022
47 Sustainability and Corporate Responsibility Report, Ericsson, 2021

Responsible and ethical innovation

New and emerging frontier technologies and applications, such as AI, connected homes, facial recognition and virtual reality, can bring social and environmental benefits. However, there are also risks of perpetuating existing biases and harmful social norms. In addition, more complex misuse scenarios may arise due to the context and immersive nature of these technologies. These innovations need to be designed, developed and deployed in a responsible and ethical way that is human-centric and rights-oriented.

The key ethical and human rights risks and impacts that should be considered as part of new product development are familiar, including risks relating to privacy, security and discrimination. The World Benchmarking Alliance's Digital Inclusion Benchmark emphasises diversity, equity and inclusion of R&D teams as a crucial contributor to ensuring ethical development of new technologies – suggesting that potential ethical issues and misuse scenarios can only be identified with diverse teams[48].

AI Ethics Industry Playbook

The GSMA has published an AI Ethics Playbook[49] and a related self-assessment questionnaire[50] – a practical tool to help bridge the gap between ethical principles and ethical practice. The Playbook explains how AI systems should be designed, developed and deployed in accordance with the principles of fairness, human agency and oversight, privacy and security, safety and robustness, transparency, ease of explanation and accountability and with full consideration of the potential environmental impact.

48 Methodology Digital Inclusion Benchmark, World Benchmarking Alliance, 2020
49 Source: www.gsma.com/betterfuture/wp-content/uploads/2022/01/The-Mobile-Industry-Ethics-Playbook_Feb-2022.pdf
50 Source: www.gsma.com/aiethics-saq

Water

Water continues to become an increasingly scarce resource. By 2025, two-thirds of the world's population is expected to face water shortages[51]. As a result, this issue is likely to become more material for companies. Mobile operators are not large consumers of water within their own operations, with direct use mainly related to consumption in offices. When considering the wider value chain, however, more significant impacts in terms of water use and potential discharges to water will be found in relation to (for example) manufacturing of electronic equipment and devices, mining and processing of raw materials that are then used in procured goods.

Water is included in the materiality assessments of nine operators covered in this review – usually referred to as water consumption, management or efficiency. This is an increase on the results of the 2021 GSMA research. In most cases, water is assessed to be of low materiality with the exception of a small number of companies operating in water-scarce regions where even relatively low levels of water use in own operations are likely to be an issue. Reporting on water consumption and discharges to water will be required from companies subject to the EU CSRD, as part of its mandatory sector-agnostic reporting requirements[52].

2/3 of the world's population is expected to face water shortages **BY 2025**

51 See Water scarcity, WWF
52 Draft ESRS Exposure Drafts and Set of Basis for conclusions, EFRAG 2022

4.0 Additional resources

From the GSMA:

ESG Metrics for Mobile: Realising value for society through common industry KPIs,
GSMA, 2022

An Introduction to Human Rights for the Mobile Sector,
GSMA, 2020

The Journey to Responsible and Sustainable Leadership: Guide to Operating Responsibly,
GSMA, 2021

The main sources used to inform Section 3: Themes to watch are:

Draft European Sustainability Reporting Standard Exposure Drafts and Set of Basis for conclusions,
EFRAG, 2022
(see sector-agnostic disclosures)

IFRS Sustainability Disclosure Taxonomy,
IFRS, 2022
(see industry metrics Technology and Communications)

Telecommunications Services,
SASB Relevant issues/Disclosure topics

Sustainability issues,
UN Principles for Responsible Investment

ESG and Climate Trends to Watch for 2023,
MSCI, 2022

The 2021 Digital Inclusion Benchmark,
World Benchmarking Alliance, 2021

The 2022 Telco Giants Scorecard,
Ranking Digital Rights, 2022

Additionally, the materiality assessments of Alibaba, Vivendi and Ericsson were reviewed to allow relevant sustainability issues from adjacent sectors to be considered.

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