Climate Risk Details

Our business is subject to numerous risks, including significant risks described in the "Risk Factors" section in our **2022 Form 10-K** (beginning on page 15). This document and our **Climate Report** describe certain physical and transition climate risks. If any of the described risks occur, our business, financial position and results of operations and our ability to execute on our Energy and Climate Strategy could be adversely affected. The risks listed are not the only risks that we will face, and additional risks and uncertainties not presently known to us or that we currently deem immaterial or insignificant may also affect our performance and ability to meet our targets (see the Cautionary Statement on page 68 of our Climate Report).

Physical climate risks

Risks and impacts	Region and site	Risk category	Mitigation measures/management approach	Potential financial impacts
Access to site (roads): Increased rainfall causes more frequent flooding of access roads to the site, floods on-site warehouse and storage areas, and/or impacts delivery of essential mining supplies.	**Africa:** Ahafo South (Ghana) **Australia:** Tanami (Northern Territory) **North America:** Porcupine (Canada) **South America:** Merian (Suriname) Yanacocha (Peru)	High to extreme based on region	Flood-proof roads and identify alternate routes; stock adequate volumes of essential materials to ensure uninterrupted supply; review and improve current storage capacity; review alternative suppliers	Production delays and/or shortages of essential materials used in mining; reduced revenue from decreased production capacity due to transport difficulties and supply chain interruptions
Access to site: Long-term increased intensity of storms could potentially delay aviation transport of workers to and from site.	**Australia:** Tanami (Northern Territory) **North America:** Éléonore (Canada) Musselwhite (Canada) Peñasquito (Mexico)	High	Enhance systems for weather monitoring and aviation runway approach navigation; expand winter runway maintenance and de-icing equipment, supplies and staffing	Aviation cost increases due to expanded plane de-icing requirements, specialized systems, equipment and staffing; reduced revenue from decreased production capacity due to worker and supplier transport difficulties

Physical climate risks

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Biodiversity and closure: Long-term changes in climate (such as more frequent extreme rainfall events and flooding, long-term reductions of rainfall, increased warming and longer dry seasons and drought, increased fire frequency and/or intensity) can impact the ability of vegetation to be established within the timeframes needed to meet closure criteria; they can also impact previously reclaimed areas, diminishing plant recovery and key biodiversity values (fauna, flora, wetlands, lakes and habitats).	All regions, with higher exposure at sites with a longer mine life	High to extreme based on region	Incorporate changing vegetation and climate trends into closure management guidance to sites; continue modeling existing rehabilitated sites to determine drought tolerance; investigate and/or partner with regulators on developing trial plantings of climate-resilient species for land rehabilitation; incorporate climate projections into closure monitoring and maintenance quality controls and remediation strategies; evaluate post-closure land-use options that incorporate climate change projections; develop community education, engagement and awareness programs in partnership with authorities to raise awareness of climate impacts on flora and fauna	Increase or delays in satisfying regulatory closure completion criteria and final relinquishment of liability; potential increase in costs for studies, design and sourcing of climate-resilient vegetation and land rehabilitation maintenance and monitoring equipment
Drought/water scarcity: Less precipitation overall during the dry season and/or high temperatures due to increased warming trends can result in prolonged drought and water scarcity with longer dry seasons and shorter winters, which could impact long-term changes in water availability and/or water quality to supply operations and watershed users.	**Africa:** Ahafo North (Ghana) Akyem (Ghana) **Australia:** Boddington (Western Australia) Tanami (Northern Territory) **North America:** CC&V (United States) Peñasquito (Mexico) **South America:** Merian (Suriname) Yanacocha (Peru)	High to extreme based on region	Identify and prioritize additional infrastructure, processes, technologies and efficiency/reuse requirements to meet peak demand projections; enhance water balance and stage-gate modeling to align with expansion requirements and meet future demand peaks; educate operations on abstraction rates and strategies for long-term sustainable aquifer yields	Impacts to permitted water-quality levels and project costs; potential additional costs for enhancing water storage facilities; infrastructure, processes and technologies to reduce water requirements of operations and ensure availability for watershed users
Dust: Increased warming or increased freeze/thaw cycles can increase dust emissions associated with the mine, its road maintenance and dust suppression management, tailings storage facilities management and/or its tailings disposal activities.	**Australia:** Boddington (Western Australia) **North America:** CC&V (United States) Éléonore (Canada)	Moderate to high based on region	Optimize deposition strategies and develop dust management strategies to account for potential long-term increase of dust emissions due to climate change	Increased costs associated with managing excessive dust (sprinklers, dust inhibitors, dust suppressant, progressive tailings storage facility reclamation); potential non-compliance/fine costs for exceeding permitted dust limits
Energy production: Longer-term, generally lower precipitation levels and extreme heat/storms may impact water supplies needed for “clean” hydroelectric and other power generation.	**Africa:** Ahafo South (Ghana) **South America:** Yanacocha (Peru)	Extreme	Assess alternative clean energy sources (such as solar) to supplement hydroelectric purchased power; assess adoption of energy-efficient equipment; explore private-public partnerships to establish green buffers around rivers that generate hydroelectric power to reduce evaporation rates	Increased cost of replacing purchased hydroelectric power due to inadequate water supply with alternate power source; carbon-based alternative sources can incur additional carbon tax and/or reputational impacts; potential costs of public works project to establish green buffer zones around hydroelectric river systems

Physical climate risks

Risks and impacts	Region and site	Risk category	Mitigation measures/management approach	Potential financial impacts
Energy transmission/supply: Bushfires, cyclones, extreme heat, and severe winds can interrupt high-voltage power transmission lines that provide electricity to external power stations that supply electricity to the mine site; on site, they can interrupt pumps and fuel supplies and endanger stored explosives.	**Australia:** Boddington (Western Australia)	Extreme	For off-site bushfires, work with state to ensure forest management plans are maintained; work with electrical power jurisdiction to ensure electrical transmission corridors are maintained and that lines are cleaned after major fires. For on-site bushfires, maintain Bushfire Management Plan and powerline corridors, and ensure critical supplies and backup generators are available	Production delays due to interruptions in power transmission; potential increased costs to ensure reliable power supply (fuel switching, backup power, other)
Flooding: Increased rainfall overall or more extreme storm events can potentially result in flooding of mine pits, maintenance and storage facilities, and unpermitted off-site discharges.	All regions and sites affected	High to extreme based on region	Incorporate climate models into site water balance and projections, water storage facility designs and freeboard models; enhance water storage level monitoring and pumping; storm proof production plant facilities	Increased capital or operating costs to increase water storage capacity, maintenance and monitoring technologies, and storm-proof enhancements to facilities; impact to production; environmental regulator penalties
Flooding: Longer-term, increased water quantity can extend the length of "peak" periods of water management and release requirements to address extended duration of pit floor flooding occurrences.	All regions and sites affected	Extreme	Increase dewatering and conveyance capacity; evaluate surface water management, establish dedicated personnel; review sediment dam sizing and overflow design; assess operation's domestic water wells to ensure capacity under projected climate conditions	Additional costs to increase dewatering capacity and water release requirements; staffing to ensure dedicated personnel to manage anticipated increase in frequency and duration of pit floor flooding occurrences
Heat: Number of days exceeding the heat stress index increases over time and stays consistently above threshold for longer periods, impacting worker health and safety and increasing the need for infrastructure, cooling energy and plantings to moderate temperatures.	All regions and sites affected, except for CC&V (North America, USA)	High to extreme based on region	Continued development of chilled underground ventilation and monitoring technologies; assess indoor work and living areas for appropriate insulation and cooling; evaluate technologies to reduce frequency/duration of worker exposure to extreme heat conditions; continue ongoing training and support for heat and hydration management and resources and responses for heat stress related events	Increased heat stress index days can impact worker health and safety and mine production; increased costs to enhance structures and technologies to reduce worker exposure; potential increase in workforce heat exposure events; reduced revenue and higher costs from negative impacts on workforce (e.g., health, safety, absenteeism)
Land erosion: Extreme rainfall events can erode areas rehabilitated for closure.	All regions and sites affected	Extreme	Review closure designs and finalize updated rock mulching ratios for closure rehabilitation areas, contour ridging	Increased costs related to reworking of previously rehabilitated areas to prevent erosion
Lightning: More frequent extreme weather events can increase the amount of lightning discharged, delaying construction activities to ensure worker safety.	**Australia:** Boddington (Western Australia) **North America:** CC&V (United States) **South America:** Yanacocha (Peru)	Moderate	Review of lightning dissipation technology for site application; wildfire monitoring and alert systems	Production delays due to halting construction activities during lightning storms
Power outages: Increased frequency and duration of extreme weather conditions, and extended power outages may occur.	All regions and sites affected, with the Ghana sites to a lower extent	High	Review backup generator and fuel storage capacity; update emergency backup plan accordingly	Reduced or delayed production due to power outages

Physical climate risks

Risks and impacts	Region and site	Risk category	Mitigation measures/management approach	Potential financial impacts
Supply chain: Extreme weather events and/or bushfires can impact the national and global supply of chemicals and other materials needed for site's process plants and mine equipment; also impacts ability to ship concentrate to international markets.	All regions and sites affected	High	Define alternative routes with key suppliers; work with key suppliers to determine their resilience to extreme weather events	Production and revenue delays; potential delays in shipping; potential costs to establish supplier climate resiliency and extreme weather event contingency plans
Tailings storage facility (TSF) overflow: Increased precipitation, extreme rainfall events or increased snowfall can potentially result in flooding the dewatering structure, exceeding the surface water runoff network capacity, "overtopping" of facility or undermining the TSF slope stability.	All regions and sites affected	High to extreme based on region	While TSF design criteria accounts for extreme weather events, additional mitigation actions can include optimizing existing storage and drainage networks; incorporating climate change projections into water balance forecasting, dam lift design and scheduling, and stability deposition planning. Under the new Global Industry Standard on Tailings Management, Newmont is systematically conducting Level 1 risk assessments at all TSFs in the Company that incorporate climate change considerations; as well as follow-up Level 2 Potential Failure Mode Analysis on key risks	Costs for permitting and development of additional infrastructure (surge ponds, storage/drainage networks, etc.); potential production losses; costs associated with legal liability and regulatory action
Transportation (shipping): Extreme weather events (including bushfires) can deteriorate road infrastructure (heat) and can prevent shipment of concentrate to markets from site; hurricanes and extreme weather can disrupt sea freight delivery of food, goods and bulk commodities to sites, impact local food production and result in relocation or more frequent dredging of key seaports (Suriname).	All regions and sites affected	Moderate to high depending on region	Evaluate alternative transport routes; incorporate projected hurricane forecasts into seasonal inventory plans; assess needs for additional storage and backup supplies; continued partnership with state and federal governments to designate "roads of strategic importance" for improvements; incorporate climate projections and extreme weather events into site's care and maintenance plans	Impacts to production; delayed revenue generation due to delays in shipment of concentrate to market and receipt of key goods and supplies needed for mines; additional capital expenditures to increase on-site chemical storage capacity
Water quality: Extended drought can increase raw water salinity and corrode processing plant equipment; increase in extreme rain events can exceed capacity of on-site treatment systems and potentially result in off-site water quality issues.	**Australia:** Boddington (Western Australia) **North America:** CC&V (United States) Éléonore (Canada) **South America:** Merian (Suriname)	Moderate to extreme depending on region	Evaluate water treatment and capacity based on potential future needs related to climate change impacts; enhance monitoring systems, implement workforce trainings for relevant staff	Increased salinity can increase water treatment and anti-corrosion maintenance costs; environmental regulatory compliance costs may increase; enhanced planning and monitoring equipment and structures can increase costs

Physical climate risks

Risks and impacts	Region and site	Risk category	Mitigation measures/management approach	Potential financial impacts
Water quantity: Reduction in water quantity (scarcity) over time can reduce throughput and stream flows to watershed and groundwater, which can reduce water allocations meant to ensure the watershed/catchment health.	**Australia:** Boddington (Western Australia) **North America:** CC&V (United States)	Extreme	Evaluate infrastructure to optimize water abstraction and usage; partner on large-scale infrastructure like desalination/water treatment	Reduced water quantity and allocations can impact production; increased cost of water
Water storage: In the case of more frequent and extreme rainfall events, the ability to store and transfer water when and where required due to license constraints could increase the risk of storage pond, wall and/or embankment instability.	**Australia:** Boddington (Western Australia)	Extreme	Implement streams project and update water balance predictions to incorporate climate change projections	Insufficient water can impact production; excess water could result in tailings storage capacity limitations to minimize impacts to stability, which would also impact production and operations and could cause shutdowns
Water treatment: Extreme precipitation, increase in intense rainfall, or increase in frequency of extreme weather events can exceed current water treatment facility capacity to store and treat water.	**Africa:** Akyem (Ghana) **North America:** Porcupine (Canada) **South America:** Yanacocha (Peru)	High to extreme based on region	Incorporate climate change projections into water balance factors; include climate change in current and future design criteria; evaluate storage pond capacity; evaluate environmental, geochemical and dry season water quality impacts	Increased capital or operating costs to increase water storage capacity (ponds and reservoirs) and treatment facilities
Water treatment: Longer-term changes in precipitation — either excess rainfall or prolonged drought conditions — can impact tailings and wastewater treatment, management and disposal for operating sites and post-closure site maintenance.	**Africa:** Ahafo North (Ghana) **South America:** Merian (Suriname) Yanacocha (Peru)	Extreme	Incorporate projected climate conditions into water balance models, water treatment planning, tailings management strategies, and long-term closure planning and design	Increased costs to review, assess, model, test and implement mitigation measures

Transition climate risks

Policy and legal: Risks and impacts	Jurisdiction	Mitigation measures	Potential financial impacts
Current regulation: Climate and clean energy regulations impact the business; risks arising from current regulations are increasing the cost of carbon taxes in Australia and Canada and increasing the costs of Renewable Portfolio Standard (RPS) compliance in Australia and the United States.	Australia Canada Mexico United States	The Company monitors developing regulations for possible legal risks in the U.S. and other jurisdictions. Newmont's global Energy and Climate Strategy is designed to mitigate this risk.	Actual and proposed changes in climate-related laws, regulations and taxes are uncertain and may incur higher costs and lower economic returns than originally estimated for new development projects and mine plans of existing operations. Specifically, this includes increased costs related to carbon taxes paid per tonne of carbon emitted above regulated thresholds (Australia); annual escalation of per-tonne pricing and impact on expansion plans due to carbon taxes on diesel fuel (Ontario, Canada); and increasing costs of purchased electricity as utilities add the cost of Renewable Energy Credits (RECs) to tariffs. This is already occurring in Australia, Mexico and the U.S., and is expected to increase in the short term and decrease in the medium term.
Emerging regulations: Emerging regulations are likely to increase our future operational costs in various jurisdictions through RPS, and carbon pricing and taxes can increase capital costs of new projects. Adding energy-efficient and lower-emissions technologies, such as electric vehicles, may be more expensive than existing diesel-powered vehicles.	Australia Canada Mexico United States	The Company monitors developing regulations for possible legal risks in the U.S. and other jurisdictions. Newmont's global Energy and Climate Strategy is designed to mitigate this risk.	Operating in certain jurisdictions could negatively affect the Company. Actual and proposed changes in climate-related laws, regulations and carbon taxes are uncertain and may incur higher costs and lower economic returns than originally estimated for new development projects and mine plans of existing operations. Specifically, increased operational and capital expenses to meet RPS requirements, which are expected to increase by 50% or greater from current costs over the next 10 years in Australia, Canada, Mexico and the U.S., may increase the cost of purchased electricity as utilities add the cost of RECs to tariffs. This is already occurring in Australia, Mexico and the U.S. and is expected to increase in the short term and decrease in the medium term. Carbon taxes, fuel switching and the transition to cleaner purchased power and/or on-site renewable energy generation will create more costs.
Legal risk: There is uncertainty regarding the potential outcome of pending or future legal proceedings or community negotiations relating to our water rights, claims, contracts and uses.	All regions	The Company monitors water rights and developing regulations for possible legal risks in the U.S. and other jurisdictions. Newmont's global Water Strategy is designed to mitigate this risk.	The continuation of our mining production is dependent on the availability of sufficient water supplies to support our mining operations. Although each of our operations currently has sufficient water rights, claims and contracts to cover its operational demands, we cannot predict the potential outcome of pending or future legal proceedings or community negotiations relating to our water rights, claims, contracts and uses.
Legal risk: Industries with a higher energy and resource intensity may be subject to future litigation related to GHG emissions, energy or water intensity.	Canada United States	The Company monitors developing regulations for possible legal risks in the U.S. and other jurisdictions. Newmont's global Energy and Climate Strategy is designed to mitigate this risk.	Should the mining and metals sector not respond quickly enough to meet globally accepted science-based reductions required to mitigate the long-term impacts of climate change, industry members may be subject to future climate litigation. In the U.S. and Canada, lawsuits have been filed against oil and gas companies to assign liability for climate-related impacts. Over time, litigation may also apply to other resource-intensive sectors that fail to set and/or meet long-term reduction targets.

Transition climate risks

Policy and legal: Risks and impacts	Jurisdiction	Mitigation measures	Potential financial impacts
Timing, efficacy, availability and cost-effectiveness of new technologies brought to market.	All sites/regions	**Short term:** Newmont has allocated $500 million, from 2021 through 2025, to transition costs with a focus on new renewable electricity generation installations (whether on site or connected to the grid), "greening" of the existing grid and energy efficiency investments. **Medium term:** In the 2025–2030 timeframe, Newmont anticipates less impact from technology and more from our heavy mobile equipment sourcing contract terms and use approach. Newmont anticipates substantial investments in electrifying large fleets once technology limitations are addressed and operational transformations that support an electric vehicle fleet, such as roads, equipment sizing and operational procedures, are updated. Beyond 2030, Newmont anticipates a focus on replacing existing equipment with electrifying technology due to heavy mobile equipment purchase-and-hold strategy with existing technology.	Write-offs and early retirement of existing assets; capital investments in technology development; costs to adopt/deploy new practices and processes, including road planning and design for underground and above-ground mines
Dependency on capacity and timing for electric power generation, transmission and distribution systems to reliably provide on-demand clean supply of purchased power to industrial/ manufacturing demands on a global scale.	All sites/regions	**Short term:** Newmont has allocated $500 million, from 2021 through 2025, to transition costs with a focus on new renewable electricity generation installations (whether on site or connected to the grid), "greening" of the existing grid and energy efficiency investments.	Abrupt and unexpected shifts in energy costs, availability
Changing investor attitudes toward mining and/or gold; uncertainty in market signals; increased costs of supplied goods; insurers and credit providers increase costs for mining and metals sector.	All sites/regions	Business and resiliency planning, climate transition planning, regular engagement with investors, responsible sourcing, collaborations and partnerships	Reduced investment in gold due to shift in investor sentiment; increased production costs due to changing input prices (e.g., energy and water) and output requirements (e.g., cyanide, tailings, waste treatment); abrupt and unexpected shifts in energy costs; re-pricing of assets (e.g., land valuation); global competition for key materials needed for new technologies (lithium, copper, rare earth minerals used in solar technology, etc.)
Reputation relating to climate change: Damage to our reputation can be the result of the actual or perceived occurrence of a variety of events and circumstances, and could result in negative publicity (e.g., with respect to our implementation of climate and water strategies, meeting climate and water targets, or competing demands with watershed and airshed stakeholders or similar issues).	All sites/regions	The Company's External Relations function works to ensure positive community relationships. An event tracking and monitoring tool, along with community commitments and community complaints and grievances registers, mitigate adverse events and circumstances. Multi-stakeholder watershed engagement practices are incorporated into the global Water Strategy. Investor engagement on issues related to climate change regularly occurs.	Damage to our reputation may result in decreased investor confidence and challenges in maintaining positive community relations and can pose additional obstacles to our ability to develop our projects, which may result in material adverse impacts on our business, financial position, results of operations and growth prospects that include: • Reduced demand for goods due to shift in investor/consumer preferences • Reduced revenue from decreased production capacity (e.g., delayed planning approvals, supply chain and interruptions, community/workforce blockades) • Reduced revenue from negative impacts on workforce management and planning (e.g., employee attraction and retention) • Reduction in capital availability