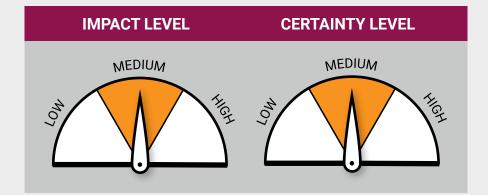
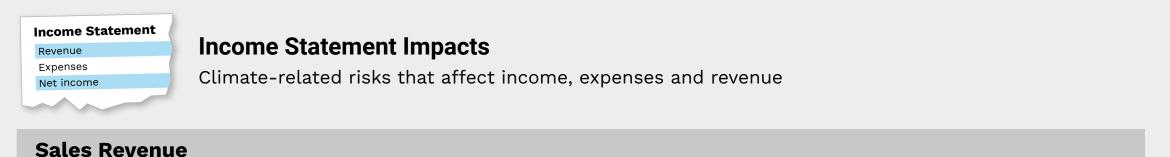
CUSTOMERS REPLACE BEEF WITH ALTERNATIVE PROTEINS

New technologies in the production of meat and protein alternatives could be substituted for meats, especially as they become cheaper to make and more affordable and desirable to customers. Brazilian cattle small-holders that have low-intensity low-yield will be the most exposed to these substitution effect risks and



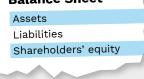
will be less likely to survive demand shocks due to the lack of economies of scale and scope.





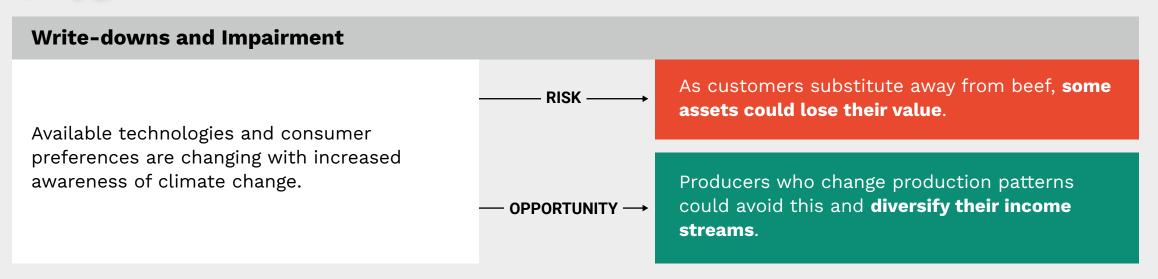
Decrease in demand could change production costs Operational costs such as holding costs for cattle ranchers and smallholders could increase.

Balance Sheet



Balance Sheet Impacts

Climate-related risks that affect assets, liabilities and shareholder equity



Source: NCBI — Meat Substitutes: Resource Demands and environmental footprints