ESG Claim Annotation Guidelines (Hierarchical Multi-Label Classification)

Objective:

Annotators are required to classify ESG-related claims into both their relevant Categories and Subcategories, adhering to a hierarchical ESG taxonomy. Each claim may belong to one or more Categories, and within each Category, it may belong to one or more Subcategories. The annotation is multi-label at both Category and Subcategory levels.

ESG Hierarchical Taxonomy Structure:

- Categories (Level 1):
 - o Environment
 - Social Capital
 - Human Capital
 - Business Model & Innovation
 - Leadership & Governance
- Subcategories (Level 2):
 - Each Category is divided into specific ESG topics (e.g., GHG Emissions, Data Security, Supply Chain Management, Business Ethics).

Annotation Instructions:

- 1. Label only sentences marked as "claim."
 - o Ignore non-claims or irrelevant content.
- 2. For each claim:
 - Assign one or more ESG Categories (Level 1).
 - Within each selected Category, assign one or more Subcategories (Level 2) that the claim addresses.
- 3. Multi-labeling is allowed and expected where applicable.
 - Example: A claim might be labelled as:
 - Category (Column 1): ['Environment','Business Model & Innovation']
 - Subcategory (Column 2): ['GHG Emissions','Supply Chain Management']
- 4. Follow the ESG Hierarchy strictly:
 - Always select a Subcategory within the correct parent Category.
 - Do not label a Subcategory without its corresponding Category.
 - o Claims may span multiple Categories and Subcategories simultaneously.
- 5. If uncertain about label assignment, use the "Unsure" tag.
- 6. Use the Definitions, Inclusion/Exclusion Criteria, and Examples provided for each Subcategory.
 - These guide decisions, especially for sentences that could fit into multiple areas.

 Pay attention to subtle differences clarified in the Included/Excluded examples.

7. Ensure Annotation Consistency:

- For similar sentence patterns, always apply the same labeling logic.
- o Avoid assumptions. Label only what is **explicitly stated** in the sentence.

ESG Categories and Subcategories

1. Environment

Definition:

The Environment category includes statements related to a company's direct environmental impacts, particularly those arising from its operations. This encompasses greenhouse gas (GHG) emissions, energy use, water management, waste management, pollution, and ecological impacts (such as biodiversity and habitat preservation).

1.1 GHG Emissions

Definition:

Statements related to **direct greenhouse gas (GHG) emissions** from company operations, including efforts to reduce these emissions, and carbon offset or carbon neutrality actions.

Inclusion Criteria

Assign this label if the sentence mentions:

- **Direct GHG emissions** (CO2, methane, nitrous oxide, etc.) from company operations.
 - Example: "We reduced CO2 emissions by 30% in the last year."
- Commitment to carbon neutrality or net-zero targets.
 - Example: "We aim to achieve net-zero emissions by 2040."
- Participation in carbon offset schemes or carbon pricing (e.g., carbon credits).
 - Example: "We offset 100,000 tons of CO2 annually."

Exclusion Criteria

- Indirect emissions (e.g., supply chain) are mentioned without direct operational focus.
 - Example: "Our suppliers have reduced GHG emissions." (This is about supply chain emissions.)
- **Energy management** efforts without mention of GHG emissions.
 - Example: "We installed solar panels to reduce energy consumption." (No direct mention of GHG emissions.)
- Vague sustainability claims without specific GHG or carbon impact.

 Example: "We are committed to sustainability." (Not directly about GHG emissions.)

Examples:

Included:

"Hydro has also started working on several initiatives to reduce direct CO2 emission in primary aluminium production."
 (Focuses on carbon emissions reduction efforts.)

• Excluded:

 "We advocate for national climate policies that advance the Paris Agreement on Climate Change."

(This focuses on policy advocacy, not direct emissions reduction.)

1.2 Air Quality

Definition:

This subcategory includes statements focused on air quality management and the reduction of air pollutants (such as NOx, SOx, VOCs, and particulate matter) produced by company operations.

Inclusion Criteria

Assign this label if the sentence mentions:

- Managing air pollutants (e.g., sulfur oxides, nitrogen oxides, volatile organic compounds).
 - Example: "We have installed air filtration systems to reduce SOx emissions from our plants."
- Initiatives or policies aimed at improving air quality.
 - Example: "The company is investing in cleaner technologies to lower particulate emissions."

Exclusion Criteria

Do not assign this label if:

- The claim is focused on GHG emission reduction (e.g., CO2, methane), label as GHG
 Emissions instead.
 - Example: "We've set a goal to achieve carbon neutrality by 2030."
- The statement is about energy or renewable energy use without addressing air pollutants.
 - Example: "We are expanding our solar energy capacity." (Focuses on energy, not air quality.)

Examples:

Included:

 "The divest- ment considerably reduces our CO2 emissions as well as our emissions of NOx and SO2."

(This focuses on air pollutant reduction, not just energy efficiency, hence it relates to air quality improvements).

• Excluded:

 "The 10 MW lithium-ion ESS captures excess solar energy produced during the day and releases the energy in late afternoon and early evening."
 (Energy-focused, not directly related to air quality.)

1.3 Energy Management

Definition:

This subcategory covers statements related to the efficient use of energy, the adoption of renewable energy sources, and efforts to reduce overall energy consumption within company operations.

Inclusion Criteria

Assign this label if the sentence mentions:

- Use of renewable energy sources such as solar, wind, or biomass.
 - Example: "We have shifted 50% of our energy consumption to renewable sources like wind and solar."
- Energy efficiency improvements in company operations.
 - Example: "By upgrading our machinery, we've reduced energy consumption by 25%."

Exclusion Criteria

Do not assign this label if:

- The focus is on **energy generation** (e.g., building new power plants or energy generation methods) without a sustainability or efficiency context.
 - Example: "We are constructing a new coal-fired power plant." (Focuses on generation, not energy use reduction or renewables.)

Examples:

Included:

 "The 10 MW lithium-ion ESS captures excess solar energy produced during the day and releases the energy in late afternoon and early evening, when demand is highest."

(Mentions renewable energy use with a sustainability context.)

• Excluded:

 "We believe that this power monitoring will help HCM's plant reforms in future through its goal of achieving lower environmental impact and costs with higher energy productivity."

(Focuses on operational impact, not energy source or reduction.)

1.4 Water & Wastewater Management

Definition:

This subcategory includes statements about managing water usage, treating wastewater, and conserving water resources within company operations.

Inclusion Criteria

Assign this label if the sentence mentions:

- Water conservation, reuse, or wastewater treatment efforts within company operations.
 - Example: "We have reduced water consumption by 20% through recycling and efficient water management practices."
- Efforts to manage water scarcity and improve water efficiency.
 - Example: "We have implemented water-saving technologies in regions facing water shortages."

Exclusion Criteria

Do not assign this label if:

- The statement is about general resource use (e.g., materials or energy) or GHG emissions (label as Resource Use or GHG Emissions).
 - Example: "We've adopted renewable energy sources to reduce our carbon footprint." (Not related to water.)

Examples:

- Included:
 - "Between now and 2020, we will continue to protect water, especially where it is scarce, and use this vital resource in harmony with our business ecosystems and local communities."

(This focuses on water conservation and managing scarcity.)

Excluded:

 "Our Environmentally Preferable Purchasing Guidelines apply not only to parts and raw materials but also to packaging materials."
 (This is about materials, not water management.)

1.5 Waste & Hazardous Materials Management

Definition:

This subcategory includes statements about managing waste, hazardous materials, and efforts related to recycling and waste reduction.

Inclusion Criteria

Assign this label if the sentence mentions:

- Waste management strategies, whether related to hazardous or non-hazardous materials.
 - Example: "We've implemented a waste management system that safely disposes of hazardous chemicals."
- Recycling efforts or safe disposal of materials (e.g., hazardous waste).
 - Example: "We recycle all plastics from production and ensure safe disposal of non-recyclable materials."

Exclusion Criteria

Do not assign this label if:

- The statement focuses on **emission reduction** (label as **GHG Emissions** or **Pollution**).
 - Example: "We aim to reduce CO2 emissions from our production facilities by
 40%." (Focuses on emissions, not waste.)

Examples:

- Included:
 - "With the exception of coal combustion residuals ("CCR"), the wastes are not usually physically disposed of on our property, but are shipped off-site for final disposal, treatment, or recycling."
 - (Focuses on waste management and recycling.)

Excluded:

 "We advocate for national climate policies that advance the Paris Agreement on Climate Change."

(Focuses on climate change, not waste management.)

1.6 Ecological Impacts

Definition:

This subcategory focuses on a company's direct **impacts on ecosystems** and **biodiversity**, including activities like **land use**, **natural resource extraction**, and **project development** (e.g., construction, siting, land acquisition, etc.). This includes the **loss of biodiversity**, **habitat destruction**, and **deforestation** resulting from these activities. The category covers **all stages** of operations, from **planning and land acquisition** to **development and site remediation**, but does **not** include the effects of **climate change** on ecosystems.

Inclusion Criteria

Assign this label if the sentence mentions:

- Direct impacts on ecosystems or biodiversity due to land use for exploration, resource extraction, or development projects.
 - Example: "Our mining operations have led to the clearing of forests, impacting local wildlife habitats."
- Deforestation or other significant habitat destruction caused by the company's activities.
 - Example: "The construction of our new facility will impact 500 hectares of forested land."
- Biodiversity loss or land use for project development (e.g., exploration, cultivation, construction, etc.).
 - Example: "We are implementing a reforestation program to restore ecosystems damaged by our resource extraction activities."

Exclusion Criteria

Do not assign this label if:

- The statement is focused on **climate change impacts** on ecosystems (e.g., carbon emissions, sea-level rise, etc.) or efforts related to **GHG reduction**.
 - Example: "Our emission reduction program will help prevent climate change impacts on coral reefs." (This is about climate change, not direct ecological impacts.)

Examples:

- Included:
 - "The forests witness an increase in biodiversity as AC Energy and its wind farms, North Luzon Renewables and NorthWind, with the help of the locals, create an ecologically diverse landscape." (Focus on biodiversity enhancement linked to project development— Ecological Impacts)

• Excluded:

"Hydro has also started working on several initiatives to reduce direct CO2 emission in primary aluminium production."
 (Focus on GHG emission reduction, no mention of biodiversity or habitat impacts.)

2. Social Capital

Definition:

The Social Capital category focuses on a company's impact on society and communities, particularly in terms of human rights, community relations, and the social well-being of stakeholders. It covers actions related to human rights advocacy, community development,

and the company's broader social responsibility initiatives, including efforts to address issues such as privacy, data security, and customer welfare.

2.1 Human Rights & Community Relations

Definition:

This subcategory includes statements about **human rights**, **community development**, and the **social impact** of the company's operations, particularly in terms of its relationships with local communities, indigenous peoples, and broader societal concerns.

Inclusion Criteria

Assign this label if the sentence mentions:

- Support for human rights or advocacy for indigenous peoples, ensuring fair treatment and the protection of basic human rights.
 - Example: "We've partnered with indigenous groups to ensure their rights are respected during land acquisition."
- **Community engagement** efforts, including **social programs**, initiatives to improve local well-being, or contributions to social causes.
 - Example: "We've invested in local education programs to empower underserved communities."

Exclusion Criteria

Do not assign this label if:

- The statement addresses environmental impacts or pollution (label as Environment).
 - Example: "We are working to reduce our carbon footprint and improve energy efficiency." (This is about environmental impact, not social issues.)
- The statement is related to **operational improvements** or **business performance** without mentioning social impact.
 - Example: "The average electricity consumption per server operated by the Transformation and Operational Efficiency Department was halved." (This focuses on operational efficiency, not human rights or community relations.)

Examples:

- Included:
 - "A total population of 6148 is getting the benefit of safe potable drinking water due to this initiative"
 (Focuses on a community development initiative that improves local wellbeing through access to essential resources.)
- Excluded:

 "We are helping clients issue Green Bonds (a type of bonds whose proceeds are used to the project of improving environment)."
 (Financial instrument for environmental impact, but no human rights or community focus.)

2.2 Customer Privacy

Definition:

This subcategory includes statements related to managing **customer data**, ensuring **privacy protection**, and complying with **data protection regulations** such as GDPR or other relevant laws.

Inclusion Criteria

Assign this label if the sentence mentions:

- **Data protection policies** or **privacy initiatives** that are implemented to safeguard customer information.
 - Example: "We've implemented strict customer data protection policies in line with GDPR."
- Obtaining customer consent for data collection or processing.
 - Example: "We ensure that customers opt-in for data sharing through transparent consent forms."

Exclusion Criteria

Do not assign this label if:

- The statement is a general marketing statement without any mention of data protection or privacy.
 - Example: "We have loyal customers in over 50 countries." (Focuses on customer base, not privacy or data protection.)
- The sentence refers to customer service or satisfaction without addressing privacy.
 - Example: "Our customer support team resolves issues in 24 hours." (No mention of privacy or data management.)

Examples:

- Included:
 - "We've implemented strict customer data protection policies in line with GDPR."
 - (Directly mentions data protection compliance and privacy.)
- Excluded:
 - "We have loyal customers in over 50 countries."
 (No privacy or data protection mentioned.)

2.3 Data Security

Definition:

This subcategory focuses on the **protection of sensitive customer or user data** from breaches, misuse, or unauthorized access through **security measures**, **risk management practices**, and **IT infrastructure** designed to safeguard information.

Inclusion Criteria

Assign this label if the sentence mentions:

- **Security measures** or **protocols** implemented to protect customer data, such as encryption, secure storage, or multi-factor authentication.
 - Example: "We ensure all customer data is encrypted and stored securely to prevent breaches."
- Risk management strategies related to data security, including the use of advanced
 IT infrastructure to protect data.
 - Example: "We regularly conduct vulnerability assessments to identify and mitigate potential security risks."

Exclusion Criteria

Do not assign this label if:

- The sentence refers to **customer privacy** without focusing on security practices (label as **Customer Privacy** instead).
 - Example: "We ensure customers are fully informed about how their data will be used." (Focuses on privacy, not security.)
- The statement is about general business activities like accessibility or affordability, not directly related to data security.
 - Example: "We offer affordable services to underserved communities." (Focus on accessibility, not data security.)

Examples:

- Included:
 - "We ensure all customer data is encrypted and stored securely to prevent breaches."

(Directly mentions data encryption and security measures.)

- Excluded:
 - "We offer affordable services to underserved communities."
 (Focuses on service accessibility, not data security.)

2.4 Access & Affordability

Definition:

This subcategory includes statements about **providing affordable access to essential products** and **services**, especially for **underserved or low-income communities**.

Inclusion Criteria

Assign this label if the sentence mentions:

- Programs aimed at improving access or affordability for underserved or low-income groups, particularly for essential services such as healthcare, education, energy, or telecommunications.
 - Example: "WRAP PPL Electric's Winter Relief Assistance Program helps customers with limited incomes reduce their home energy use."

Exclusion Criteria

Do not assign this label if:

- The sentence is about **general corporate philanthropy or donations** without a focus on **improving access** to essential products or services.
 - Example: "We provide grants for local healthcare." (General charitable giving, not focused on improving access or affordability.)
- The focus is on **marketing or customer satisfaction** without a clear mention of access or affordability for underserved groups.
 - Example: "We offer customer loyalty rewards." (Not about access or affordability.)

Examples:

- Included:
 - "WRAP PPL Electric's Winter Relief Assistance Program helps customers with limited incomes reduce their home energy use."
 (Focuses on providing affordable access to energy for low-income customers.)
- Excluded:
 - "We are developing new solutions that meet increasing customer demand for 24/7 renewable power and greater energy efficiency."
 (Talks about customer demand and product development but does not mention affordability or targeted support for underserved groups.)

2.5 Product Quality & Safety

Definition:

This subcategory includes statements about **ensuring product safety**, **quality standards**, and **regulatory compliance** for products to meet customer health and safety expectations.

Inclusion Criteria

Assign this label if the sentence mentions:

- Safety standards or testing of products.
 - Example: "We conduct regular safety tests on all products to meet international standards."
- Health and safety concerns related to products.

 Example: "Our products are free from harmful chemicals, ensuring consumer safety."

Exclusion Criteria

Do not assign this label if:

- The statement is about **customer service** or **product features** without mentioning safety or quality.
 - Example: "Our products have a sleek design." (Not related to safety or quality.)

Examples:

• Included:

"Examples of how our safe and sustainable products offer alternatives to fossil materials are shown on the right." (Explicitly mentions "safe products", linking to product safety and quality assurances.)

• Excluded:

"We are developing new solutions that meet increasing customer demand for 24/7 renewable power and greater energy efficiency." (Describes product innovation and customer needs, but no mention of safety or quality control aspects.)

2.6 Customer Welfare

Definition:

This subcategory covers statements about a company's **commitment to customer welfare**, including **health**, **nutrition**, and the **well-being** of consumers, particularly in relation to the impact of products or services.

Inclusion Criteria

Assign this label if the sentence mentions:

- Health and nutrition aspects of products.
 - Example: "Our food products are made with organic ingredients to support healthy eating."
- Ethical sourcing or other welfare-related initiatives for consumers.
 - Example: "We ensure all our products are ethically sourced, with a focus on consumer well-being."

Exclusion Criteria

Do not assign this label if:

 The statement is about product features or marketing without directly addressing welfare. o Example: "We offer a wide range of products." (No direct mention of welfare.)

Examples:

Included:

"The collaboration will enable Nestlé to deliver sustainable, tasty, and nutritious plant-based products that provide a vegan source of protein, healthy lipids, and various micronutrients."

(Focuses on customer welfare by emphasizing nutrition and consumer wellbeing through product content.)

Excluded:

"We are developing new solutions that meet increasing customer demand for 24/7 renewable power and greater energy efficiency."

(Focuses on customer demand and product innovation, but does not address health, nutrition, or direct welfare impacts on consumers.)

2.7 Selling Practices & Product Labeling

Definition:

This subcategory focuses on **ethical marketing practices**, including **honest product labeling** and ensuring **transparency** in advertising and selling.

Inclusion Criteria

Assign this label if the sentence mentions:

- Ethical marketing and advertising practices (e.g., truth in advertising).
 - o Example: "We ensure all marketing claims are verified and substantiated."
- Clear and accurate product labeling that helps consumers make informed choices.
 - Example: "Our products are labelled with all ingredients and potential allergens to ensure transparency."

Exclusion Criteria

Do not assign this label if:

- The statement is about **general product descriptions** without focusing on ethical marketing or labeling.
 - Example: "Our products come in a variety of sizes." (Not about labeling or ethical selling.)

Examples:

• Included:

 "In fiscal 2013 the In addition, Konica Minolta is promoting environmentally responsible sales and services with its Green Marketing activities." (Focuses on ethical marketing practices through "Green Marketing", aligning with responsible selling practices.)

• Excluded:

"Our cost-effective fibre-based solutions are made from a renewable resource, and are lightweight, recyclable and biodegradable."
 (Focuses on product features and sustainability benefits but does not mention ethical marketing practices or product labeling transparency.)

3. Human Capital

Definition:

The Human Capital category encompasses statements related to a company's workforce management, including fair labour practices, employee safety, health, well-being, and diversity. It focuses on the ethical treatment of workers, ensuring equal opportunities, inclusivity, and a safe working environment. Human capital also involves fostering employee engagement, professional development, and maintaining compliance with labour laws.

3.1 Labour Practices

Definition:

This subcategory includes statements about **fair labour practices**, compliance with **labour laws**, and the **ethical treatment of workers**, such as **equal pay**, prevention of **child labour**, and the protection of **workers' rights**.

Inclusion Criteria

Assign this label if the sentence mentions:

- Equal pay, child labour prevention, fair wages, and freedom of association for workers.
 - Example: "We ensure that all workers receive fair wages and benefits in compliance with local labour laws."
- Compliance with labour laws or worker rights protections.
 - Example: "We follow international labour standards to ensure safe working conditions."

Exclusion Criteria

- The sentence refers to workforce size or expansion without mentioning labour practices or worker rights.
 - Example: "Our workforce grew by 10% last year." (No mention of labour practices or treatment of workers.)
- The statement is about **general business activities** without addressing labour-related issues.

 Example: "We launched a new marketing campaign." (No connection to labour practices.)

Examples:

Included:

 "We ensure that all workers receive fair wages and benefits in compliance with local labour laws."

(Clearly addresses fair wages and legal compliance in labour practices.)

• Excluded:

"We believe in acting responsibly and sustainably in all areas of our business and work to make a difference in areas as diverse as environmental impact, diversity, affordability, mental health and wellbeing."

(Mentions diversity and well-being but in a broad CSR context without specifying labour rights, fair wages, or labour law compliance.)

3.2 Employee Health & Safety

Definition:

This subcategory covers statements related to maintaining a **safe and healthy work environment** for employees, including efforts to **prevent injuries**, **ensure physical and mental well-being**, and comply with **safety regulations**.

Inclusion Criteria

Assign this label if the sentence mentions:

- Employee safety measures, injury prevention, or health initiatives.
 - Example: "We provide safety training and personal protective equipment (PPE) to ensure worker safety."
- Physical and mental health programs that focus on well-being.
 - Example: "We offer wellness programs to support the mental health of our employees."

Exclusion Criteria

Do not assign this label if:

- The statement is about **general business performance** or **workforce expansion** without addressing health and safety specifically.
 - Example: "We increased our workforce by 10% this year." (No mention of health or safety practices.)

Examples:

- Included:
 - "Downer's sustainability strategy is designed to focus on the health and safety of its people, environmental sustainability and the advancement of the

communities in which Downer operates."
(Focuses on employee health and safety directly as a core element of sustainability efforts.)

• Excluded:

 "The plan covers employees of Legrand SA and also those of Legrand France, Legrand SNC, Alpes Technologies, Cofrel, Ura, Planet-Wattohm, Intervox Systèmes, Legrand Cable Management, Legrand Énergie Solutions and Legrand Data Center Solutions."

(Focuses on scope of employee coverage or workforce distribution without mentioning health or safety initiatives.)

3.3 Employee Engagement, Diversity & Inclusion

Definition:

This subcategory addresses efforts to **engage employees**, **promote diversity**, and foster an **inclusive work environment** that embraces various **demographic** and **cultural differences**.

Inclusion Criteria

Assign this label if the sentence mentions:

- **Diversity and inclusion initiatives**, including hiring practices that ensure diverse representation.
 - Example: "We have implemented a diversity hiring program to ensure equal opportunities for all candidates."
- Employee engagement programs that focus on employee satisfaction, motivation, and inclusion in company decisions.
 - Example: "We conduct annual surveys to gauge employee satisfaction and foster a collaborative work environment."

Exclusion Criteria

Do not assign this label if:

- The statement focuses on **workforce expansion** or **company growth** without mentioning engagement, diversity, or inclusion.
 - Example: "We are expanding our team to 1,000 employees." (No mention of engagement or diversity.)
- The focus is on general **employee benefits** or **compensation** without addressing diversity or inclusion.
 - Example: "We offer competitive salaries and benefits." (Does not address diversity or engagement.)

Examples:

Included:

"Colleague engagement We continue our work to be the Greenest Grocer by
educating colleagues on how to grow our business while reducing our
operational carbon emissions."
(Focuses on employee engagement through education programs aimed at
involving employees (colleagues) in company sustainability initiatives, which
aligns with engagement efforts.)

• Excluded:

"We believe in acting responsibly and sustainably in all areas of our business and work to make a difference in areas as diverse as environmental impact, diversity, affordability, mental health and wellbeing."

(Focuses on broad corporate values without describing specific employee engagement or diversity initiatives.)

4. Business Model and Innovation

Definition:

The Business Model and Innovation category focuses on how a company adapts and innovates to address environmental and social challenges. This includes developing sustainable business models, innovative products, and resilient strategies that enhance long-term value while reducing negative impacts on the environment and society. It involves practices like circular economy adoption, sustainable supply chain management, and climate resilience.

4.1 Product Design & Lifecycle Management

Definition:

This subcategory focuses on innovation and sustainability in product design, particularly efforts to reduce environmental impacts throughout the product lifecycle, from design to end-of-life management. This includes practices like the circular economy, eco-friendly design, and product recycling.

Inclusion Criteria

Assign this label if the sentence mentions:

- Circular economy practices, such as designing products to be reused, refurbished, or recycled.
 - Example: "We have redesigned our products to use 100% recyclable materials."
- **Eco-friendly product design**, aiming to minimize the environmental impact of manufacturing, usage, and disposal.
 - Example: "Our new product line is made from biodegradable materials to reduce landfill waste."

- Product recycling or initiatives to extend the product lifecycle through recycling or repurposing.
 - Example: "We offer a take-back program to ensure our products are recycled at the end of their lifecycle."

Exclusion Criteria

Do not assign this label if:

- The statement is about **product features** or **new product launches** without mentioning **environmental sustainability**.
 - Example: "We launched a new line of consumer electronics." (No mention of sustainability or lifecycle management.)

Examples:

- Included:
 - "However, following on from our work with the universities, we will be testing bio-based and recycled plastic films for secondary and tertiary packaging in several markets during 2020."
 - (Focuses on product lifecycle innovation, using recycled materials in product packaging, aligning with circular economy principles.)

Excluded:

 "We are developing new solutions that meet increasing customer demand for 24/7 renewable power and greater energy efficiency."
 (Focuses on product performance (energy efficiency) without mentioning product design, lifecycle management, or circularity.)

4.2 Business Model Resilience

Definition:

This subcategory includes statements about how a company's business model adapts to and mitigates risks from environmental, social, and economic challenges. It focuses on a company's capacity to thrive in a changing market by incorporating sustainability and risk management strategies.

Inclusion Criteria

Assign this label if the sentence mentions:

- Adaptation strategies or resilience to market changes, climate risks, or economic shifts.
 - Example: "We are diversifying our revenue streams to ensure business continuity in the face of economic uncertainty."
- Long-term sustainability efforts aimed at ensuring continued success despite external environmental or societal changes.
 - Example: "Our business model is built to be resilient, with a focus on sustainability and diversification."

Exclusion Criteria

Do not assign this label if:

- The statement focuses purely on short-term growth or financial performance without addressing long-term resilience or sustainability.
 - Example: "Our profits increased by 20% this year." (Not focused on resilience or sustainability.)

Examples:

Included:

 "The initiatives combine investments with policy dialogue and technical assistance in a highly coordinated manner to increase economic resilience, foster integration and address common global and regional challenges such as climate change."

(Focuses on enhancing business model resilience through coordinated sustainability strategies.)

Excluded:

"In 2019, Eiffage's rating moved up two notches to reach B, a reflection of the Group's significant advances in environmental reporting."

Focuses on reporting achievements, not on how the business model is resilient or adaptive.)

4.3 Supply Chain Management

Definition:

This subcategory covers a company's efforts to manage sustainability risks within its supply chain. It includes efforts to engage with suppliers on their environmental and social impacts, including ethical sourcing and supplier collaboration for improving sustainability.

Inclusion Criteria

Assign this label if the sentence mentions:

- Sustainable supply chain practices, such as supplier selection, monitoring, and engagement on environmental and social issues.
 - Example: "We work closely with suppliers to ensure they meet our sustainability standards."
- **Ethical sourcing** of materials, ensuring that suppliers adhere to specific environmental and social criteria.
 - Example: "All our suppliers are required to source materials responsibly, minimizing environmental impact."

Exclusion Criteria

- The statement discusses **internal operations** or **financial performance** without addressing supply chain practices.
 - Example: "We've streamlined our internal operations to improve efficiency."
 (No mention of supply chain.)

- Included:
 - "The partnership is an example of how we work with our supply chain to reduce emissions."
 - (Focuses on collabourative supply chain sustainability efforts.)
- Excluded:
 - "Environmentally and socially responsible supply chains Sustainability To meet these challenges, Kering has established a dedicated organization." (Focuses on internal organizational setup, not actual supply chain management practices.)

4.4 Materials Sourcing & Efficiency

Definition:

This subcategory includes statements about how a company **sources materials** sustainably, focusing on reducing the environmental impact of materials used, maximizing **resource efficiency**, and incorporating **renewable or recycled materials**.

Inclusion Criteria

Assign this label if the sentence mentions:

- Sustainable materials sourcing, such as using recycled, renewable, or low-impact materials.
 - Example: "We now use 50% recycled materials in all of our packaging."
- **Resource efficiency** in materials usage, such as reducing waste, optimizing materials in manufacturing, or reducing the consumption of raw resources.
 - Example: "Our production processes are designed to minimize material waste and maximize efficiency."

Exclusion Criteria

- The statement is about product features without addressing material sustainability or efficiency.
 - Example: "Our products are available in a variety of colors and sizes." (No mention of materials or sustainability.)

• Included:

 "We will do this through greener sourcing and greener production, that will reduce the carbon footprint of the products we deliver to our customers." (Mentions greener sourcing, indicating sustainable materials sourcing practices aimed at reducing environmental impact. Direct alignment with sustainable sourcing and materials efficiency.)

Excluded:

"This is essential to stimulate and accelerate further development of lower carbon fuels, technologies and innovations to provide the full range of energy needs for a growing and more prosperous global population." (Focuses on low-carbon technology development, not specifically on materials sourcing or efficiency.)

4.5 Physical Impacts of Climate Change

Definition:

This subcategory covers statements about how a company's operations or assets are affected by the **physical impacts of climate change**, such as **extreme weather events**, **sea level rise**, and other climate-related risks to business operations, infrastructure, or supply chains.

Inclusion Criteria

Assign this label if the sentence mentions:

- Climate change adaptation strategies for dealing with physical risks like extreme weather, flooding, drought, etc.
 - Example: "We are upgrading our facilities to withstand increased flood risks due to climate change."
- **Physical impacts** of climate change on operations, supply chains, or infrastructure.
 - Example: "Rising sea levels have forced us to relocate some of our manufacturing facilities."

Exclusion Criteria

Do not assign this label if:

- The statement addresses **GHG emissions** or **climate change mitigation**, which should be labelled under **GHG Emissions** or **Pollution & Waste Management**.
 - Example: "We are committed to reducing our carbon footprint by 50% by 2030." (Focuses on mitigation, not physical impacts.)

Examples:

Included:

"The plan stresses the District's objectives to preserve and protect the environment, adjust to new regulations and water system changes, seek costeffective collaborative solutions and prepare for uncertainties including climate change and challenges in the Sacramento-San Joaquin Delta." (Focuses on physical impacts of climate change and how operations are adapting to those risks.)

Excluded:

"We are committed to doing our part to enable the transition to the low carbon economy, in alignment with Canada's commitments to reduce GHGs 30% by 2030 over 2015 levels."
(Focuses on emission reduction and climate change mitigation, not on

5. Leadership & Governance

adapting to physical impacts.)

Definition:

The Leadership and Governance category focuses on a company's management practices, ethical conduct, and governance frameworks. It includes business ethics, compliance with laws, transparency, and how companies manage risks associated with environmental, social, and governance (ESG) factors. This category also covers the responsibility of leadership to implement and uphold ethical and sustainable practices across the organization.

5.1 Business Ethics

Definition:

This subcategory includes statements about a company's commitment to ethical behaviour, anti-corruption policies, compliance with laws, and maintaining transparency in its business practices.

Inclusion Criteria

Assign this label if the sentence mentions:

- Anti-bribery or anti-corruption policies.
 - o Example: "We have a zero-tolerance policy for bribery and corruption."
- Ethical codes of conduct, including adherence to specific ethical standards.
 - Example: "All employees are required to follow our comprehensive ethical code of conduct."
- Transparency in business operations, such as honest reporting or disclosure of company practices.
 - Example: "We publish an annual transparency report that outlines our business practices."

Exclusion Criteria

Do not assign this label if:

- The statement is about generic company values without specific actions or policies to back them up.
 - Example: "We pride ourselves on integrity." (Too vague; no substantiated actions mentioned.)
- The focus is on financial performance or growth without mentioning ethics or governance.
 - Example: "Our profits increased by 20% this year." (No reference to ethics or anti-corruption.)

Examples:

• Included:

 "Environmental, social and governance ("ESG") objectives The Board is committed to the promotion of strong ethical, environmental and corporate social responsibility principles."
 (Focuses on governance and ethical commitments explicitly stated as

(Focuses on governance and ethical commitments explicitly stated as company objectives.)

Excluded:

 "At the same time, in response to today's environmental and social challenges, the Group's business lines are offering solutions to customers and partners to help with their own ecological transitions and increase their positive impact on society."

(Focuses on offering sustainability solutions to external stakeholders, but lacks a direct reference to internal business ethics or governance policies.)

5.2 Competitive Behaviour

Definition:

This subcategory includes statements related to a company's competitive practices, particularly in terms of fair competition, anti-monopolistic behaviour, and ethics in the marketplace. It focuses on ensuring companies compete fairly and avoid anti-competitive actions like price-fixing or collusion.

Inclusion Criteria

Assign this label if the sentence mentions:

- Anti-monopolistic behaviour, including efforts to ensure fair competition.
 - Example: "We adhere to strict anti-trust laws to prevent unfair business practices."
- **Ethical competition** practices, such as ensuring fair market behaviour and avoiding manipulation or collusion.
 - Example: "We are committed to transparent pricing strategies and avoiding unfair competitive advantages."

Exclusion Criteria

Do not assign this label if:

- The statement is about **general business growth** or **financial performance** without focusing on **competitive behaviour**.
 - Example: "We are expanding into new markets." (Focuses on growth, not competition.)

Examples:

- Included:
 - "We adhere to strict anti-trust laws to prevent unfair business practices."
 (Directly addresses anti-competitive behaviour.)
- Excluded:
 - "We are expanding into new markets."
 (No mention of fair competition or anti-monopolistic behaviour.)

5.3 Management of the Legal & Regulatory Environment

Definition:

This subcategory covers how a company manages compliance with legal requirements, regulatory standards, and its involvement in lobbying or influencing public policies related to ESG issues.

Inclusion Criteria

Assign this label if the sentence mentions:

- Compliance environment with laws and regulations related to business practices, sustainability, and ESG standards.
 - Example: "We ensure compliance with all national and international environmental regulations."
- Engagement with regulators or policy advocacy to influence legal standards.
 - Example: "We actively engage with regulators to support the development of climate change legislation."

Exclusion Criteria

- The statement focuses on **business operations** or **strategic growth** without discussing legal or regulatory compliance.
 - Example: "We have launched a new global marketing campaign." (Not related to regulatory management.)

• Included:

"In Trinidad, BP is upgrading its water treatment facilities to meet consent levels agreed with the regulators to apply water discharge rules arising from the Certificate of Environmental Clearance (CEC) Regulations 2001 and associated Water Pollution Rules 2007."

(Addresses compliance with environmental regulations and regulatory engagement.)

• Excluded:

"The Fund recognises that environmental and social challenges can create attractive investment opportunities and has actively committed to date approximately 1.3% of its assets to environmental and social themed investing."

(Focuses on ESG-themed investment opportunities, not legal or regulatory compliance.)

5.4 Critical Incident Risk Management

Definition:

This subcategory includes statements about how a company **prepares for and manages risks** associated with **low-probability, high-impact incidents** (e.g., **disasters**, **pandemics**, **cybersecurity breaches**) that could affect the company or its stakeholders.

Inclusion Criteria

Assign this label if the sentence mentions:

- Risk management plans for unforeseen, critical events that could disrupt business or have significant societal impacts.
 - Example: "We have a disaster recovery plan in place to manage data breaches and cyber-attacks."
- **Preparedness for high-impact risks**, including natural disasters, crises, or other systemic risks.
 - Example: "Our crisis management strategy includes regular drills and contingency planning for business continuity."

Exclusion Criteria

- The statement focuses on day-to-day operations or risk management without addressing critical incidents.
 - Example: "We improved our internal data systems." (Not about managing critical, high-impact risks.)

• Included:

 "Decommissioning Engineering Company, TEPCO strove to mitigate risk caused by contaminated water, putting the utmost priority on purifying heavily contaminated water by taking a multi-layered approach that consists of seven aspects, including ALPS multi-nuclide removal equipment." (Focuses on managing critical incident risks.)

Excluded:

"Our investment in LED at Bullring, Birmingham reduced electricity consumption by 20% year-on-year."
 ((Focuses on energy efficiency improvement, not on critical incident preparedness.)

5.5 Systemic Risk Management

Definition:

This subcategory addresses a company's ability to **identify** and **mitigate systemic risks** that could lead to widespread **economic** or **social disruptions**. It includes **managing risks** that affect entire industries, economies, or societies (e.g., financial crises, climate change, large-scale infrastructure breakdowns).

Inclusion Criteria

Assign this label if the sentence mentions:

- **Systemic risk management strategies** that focus on **large-scale risks** to the company and its stakeholders.
 - Example: "We have implemented measures to safeguard against financial crises and their potential impact on global markets."
- Resilience planning for large-scale, disruptive events that affect society or the global economy.
 - Example: "We invest in resilience strategies to address the global impacts of climate change."

Exclusion Criteria

- The statement focuses on individual company risks or localized issues.
 - Example: "We developed a new internal auditing system." (Not related to systemic risk.)

Included:

"Based on these scenario analyses, Tokio Marine Group engages in industry-academia collaboration to provide climate change risk research and natural disaster-related products and services, promote environmental protection activities such as mangrove planting, and implement environmental and disaster-prevention awareness programs."
(Addresses systemic risk management strategies to mitigate large-scale societal disruptions from climate change and disasters.)

• Excluded:

"Aligned with a commitment to sustainable investing, Addenda applies
environmental, social and corporate governance (ESG) considerations to its
investment decisions and actively promotes sustainable financial markets."
(Focuses on ESG investment strategy and market sustainability, but does not
mention managing systemic risks like global disruptions or resilience
planning.)