

ESG Risk Radar for Armenia Assessment of climate-related and other ESG Risks

Central Bank of Armenia

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implemented by



List of Abbreviations

BIS Bank for International Settlement

CBA Central Bank of Armenia

EBA European Banking Authority

ESG Environmental, Social and Governance Factors

IPCC The Intergovernmental Panel on Climate Change

GDP Gross Domestic Product

GF Green Finance

GHG Green House Gases

MFI Microfinance Institution

NACE Nomenclature statistique des activités économiques

NBG National Bank of Georgia

SRI Socially Responsible Investment

TI Transitional Indicators

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1. The Risk Radar Overview

In the context of the economic consequences of climate change, the management of Environmental, Social and Governance (ESG) risks has become a high priority on the agenda of Central Banks world-wide to secure continuing financial stability.

To overcome the systematic challenges of financial institutions to manage ESG and especially climate-related risks, German Sparkassenstiftung for international Cooperation (DSIK) is offering the tool Risk Radar in cooperation with Kempten University to enable financial institutions to analyze climate related and other ESG risks within their credit portfolios. This instrument uses a pragmatic yet comprehensive approach: Based on the persuasion that risk management is at its best when it is fully understood, it replaces speculative modelling with knowledge-based, transparent assessments. As a result, it offers a complete overview over ESG risks in the loan portfolio in the form of a heat-map analysis that is compatible with the recommendations of the Bank for International Settlement (BIS) and can be used as a basis for individual risk analysis and pricing in the loan giving process.

By applying a systematic top-down scoring methodology, risks become measurable and comparable, which in turn enables financial institutions and regulators to implement successful risk management strategies.

The assessment process consists of the following steps:

- Desk research resulting in ESG-risk assessment on sector-level based on public and non-public sources of information, international reports and conducting comprehensive literature research.
- Integration of local expertise and scientific institutions for the evaluation and optimization of the assessments in a multi-stakeholder process.
- Compilation of an extensive ESG-risk database on sector level as well as explanatory sector profiles (detailed reports for sectors with high ESG risk)
- "Heat Map"-assessment for individual financial institutions as well as aggregated on country-level.
- Full disclosure of the findings and method of calculation of the analysis for the evaluation, use and needs adjustment of the data for the financial institutions.

In its first version, this cost-effective, tried and tested method has been implemented with financial institutions and central banks on five continents.

This handbook is now introducing the second version of the Risk Radar. The methodology has been further optimized and streamlined: The use of sub-scorings for all major scoringitems allows an even more detailed and transparent assessment and reduces the subjectivity inherent in knowledge-based approaches to a minimum. To achieve this greater degree of

objectivity and precision, the methodology was completely reworked and fundamentally expanded.

2. ESG Risks

Climate change in combination with the transformation toward sustainability are giving rise to risks that have so far been neither recognized nor considered by conventional risk management. These risks, which are referred to as "ESG risks" or "sustainability risks", have the peculiarity that the name was chosen very unfortunately. This is because – contrary to what the name suggests – these ESG risks do not result from ESG or sustainability, but from a lack of both. This lack can be on the side of a company if sustainability aspects are not or not sufficiently taken into account and this leads to economic or legal disadvantages in the context of the transformation of society and the markets. Alternatively, the lack can also be on a global level and affect companies in a specific region, e.g., through the effects of climate change – regardless of whether they have made efforts to operate sustainably.

The supervisory authorities – with the European Banking Authority (EBA) taking the lead – define ESG factors as follows: "ESG factors are environmental, social or governance matters that may have a positive or negative impact on the financial performance or solvency of an entity, sovereign or individual" (EBA 2021, 31). The EBA then differentiates: "While ESG factors can have positive or negative impacts on institutions through their core business activities, this report focuses more on the latter, in line with the prudential approach to risk management. On the negative side, ESG factors may impact institutions' financial performance by materializing through financial risk categories, such as credit, market, operational, liquidity and funding risks, which are primarily affected by an institution's exposure to its counterparties and invested assets." (EBA 2021, 32)

And further:

"From a prudential perspective, ESG risks for institutions can thus be defined as the negative materialization of ESG factors through their counterparties or invested assets." (EBA 2021, 32)

In the context of the EBA report, ESG risks are therefore:

- the risks of any negative financial impact on the bank,
- arising from the current or anticipated impact of ESG factors on its counterparties
- or invested assets.

Thus, to be considered an ESG risk, an ESG issue must have significant economic impact that affects the bank/savings institution. It should be noted that the risks do not represent a new risk category in addition to, for example, market or credit risks. Instead, they are to be understood as cross risks that act as drivers of other risks and can cause or intensify them. Thus, credit defaults due to flooding are still credit risks, but their cause is ESG.

Due to its relevance, in most countries the topic is highly placed on the agenda of central banks, banking supervision and financial market regulators.

3. The Risk Radar Methodology

In its publication "Principles for the effective management and supervision of climate-related financial risks", the Basel Committee on Banking Supervision (BIS 2022) states that "Climate change may result in physical and transition risks that could affect the safety and soundness of individual banking institutions and have broader financial stability implications for the banking system" (BIS 2022, 1). Therefore, they recommend "a principles-based approach to improving risk management and supervisory practices related to climate-related financial risks" (BSI 2022, 1).

The roll-out and detailing of this approach often rests on the shoulders of the regional Central Banks and Supervisory activities. As all central banks address the same topics, their approaches are often rather similar. The challenge, then, lies in the implementation process on bank-level. Here, in addition to the formulation of requirements (especially concerning ESG-risk management), banks and MFI's often need more than just a sensitization and definition of regulatory rules: As data for ESG assessment is scarce and experience needs to be built, it is advisable and helpful to offer pragmatic tools and methods to get acquainted with the topic and receive relevant information without the need of investing too many resources.

This is where the tried and tested tool "Risk Radar" can offer great benefits. As knowledge-based, qualitative scoring approach aligned with international ESG regulations, it offers banks a quick access into ESG risk assessment on sector level with options for portfolio-risk assessment and visualization (heat maps). Using the sector data and a set of sector-specific questions, this information can further be extended to a risk management on loan level, offering banks all options for an ESG-based loan giving process.

Designed in partnership with Kempten University, the tool uses a scoring-based approach to assess the specific conditions of the economic sectors within a country and defines a data base with ESG risk assessments accordingly. The tool has been implemented over 100 times in Germany for savings and cooperative banks as well as with DSIK for many banks and central banks across five continents.

3.1 Closing the Data-Gap

In its practical application, for most banks the influence of ESG risks on credit risk is most relevant (for this and the following also see NBG 2022). In contrast, the availability of practitioners' instruments and the focus of most publications is focused on big companies listed on the capital markets and hence the influence of ESG factors on stock prices and

bond ratings instead. This focus is not helpful for most banks, as for their customers ESG information is neither published nor even known, and there are no ESG ratings or even assessments available.

Concerning methodologies, in its discussion paper the EBA gives a short overview over the practical approaches to ESG risk management (EBA 2020, 68). While the Alignment Method and Risk Framework Method are both interesting and full of potential, they require data that is not yet widely available. Hence, the Exposure Method comes into focus. Here the EBA states: "The third approach is a tool that banks can apply directly to the assessment of individual clients and individual exposures [...] This can then be used to complement the standard assessment of financial risk categories. [...] This method can be described as the possibly most practical method and the most straight-forward to implement amongst the three approaches."

The Exposure Method is a scoring methodology applied to assess the relevant influence of ESG factors on the counterparty providing an indication of the potentially harmful consequences on the banks (e.g., via credit defaults). It is this method that is used with the Risk Radar. Using a scoring approach, it offers an assessment whether and to which extend the client (through his location, business model or activities) is in danger of negative impacts of ESG-factors, impeding the ability to pay back the loan and thus causing an ESG risk for the bank/MFI.

All scoring methodologies use one of two different approaches: A bottom-up approach would mean to collect relevant data from the client – as is common practice in credit risk management to assess the credit worthiness. However, as already stated above, in the context of ESG and climate risk assessment this would require information on part of the client which often is not available for the time being.

Hence, the Risk Radar is a scoring methodology that chooses the top-down approach: Using available data to assess the potential ESG risk of a sector, the data problem at the loan-level is largely solved. After identifying and assessing the sector risk, only a few simple questions are needed to conclude from the industry level to the client/counterparty level.

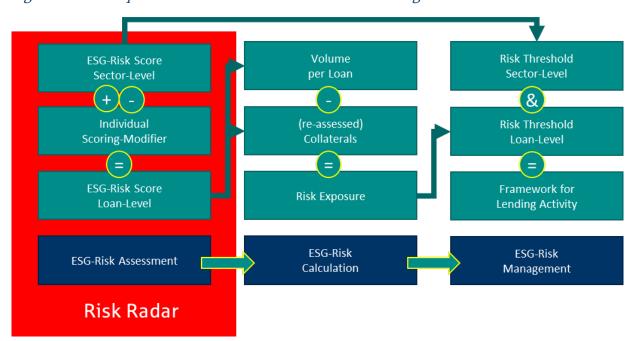


Figure 1: The Scope of the Risk Radar within ESG risk management

3.2 A transparent Knowledge-based Approach

Based on the information of this assessment, banks can then proceed with the ESG risk management process by first quantifying the risk and then devising management consequences like thresholds, additional collateral-requirements, or consequences on pricing of loans.

At its core, managing risks means to identify and assess potential threats to understand them and consider them in an informed decision making. "But risk management is not, and will never be, a magic formula that will always give you the right answer. It is a way of thinking that will give you better answers to better questions and by doing so helps you to shift the odds in your favor" (Borge 2001).

In many risk categories, this is achieved by the analysis of past data. Being both future-oriented and unprecedented, for ESG the necessary data for the use of complex mathematical models is yet missing. As a pragmatic compromise, the qualitative analysis combined with a structured, thorough consideration of all relevant aspects is an important first step on the learning journey of ESG risk management.

Therefore, the Risk Radar has been deliberately kept pragmatic, comprehensible and explainable. By fully disclosing the mechanics, there is no "black box": The risk assessment via the sector scoring scheme is transparently available to the users and can be adapted if necessary. As a result, it is designed as an understanding-based and yet lean risk management tool, that is adaptable to the individual context and needs of the bank.

To implement a thorough and systematic assessment of ESG risks, all relevant aspects (as highlighted in figure 2) need to be considered.

Figure 2: Determination of the ESG-Risk Score on Sector-Level

For each individual sector, the assessment process starts with physical climate risks where both acute and chronic forms are considered. For both, many sources are available both on an international and national level giving an informed view over scientific findings and practitioners estimations concerning the extent and the way that climate change will affect the economic system.

The crucial aspect of this analysis is to determine how different sectors are affected. While some companies in some sectors are close to nature and directly affected even by relatively moderate weather events or -changes (e.g., fruit farmers in the sector of Agriculture), others are less vulnerable to, e.g., storms but still affected by temperature (e.g., power plants with their need for cool water within the cooling progress of reactors) or the availability of natural resources like water (e.g., the paper industry).

The next important aspect is to model transition risks. Transition risk breaks down into the question of how fast and vehement the transformation is happening for a given sector – and, consequently, how likely it is for a given company to not be able to keep up with it and suffer economic damage accordingly.

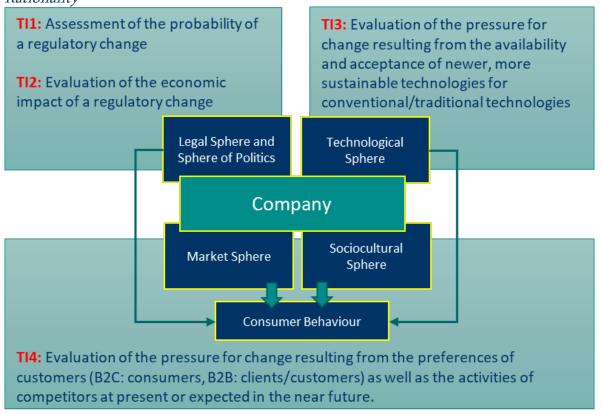
Here, two aspects are of equal importance: The GHG contribution and the Transitional Intensity of each sector. The first is the consideration of an industry's contribution to global emissions. This is important, as for highly emitting industries, there often is increasing regulatory pressure. The second is the currently perceptible pressure that manifests as

regulatory developments, the availability of new and alternative technologies as well as the perception of the public in general and especially the relevant customers/consumers.

To model the transitional intensity, the stakeholder-model of Socio-Economic Rationality (Schaltegger et al. 2003, 36 following) is used: This describes the company's framing conditions as a set of spheres in which different kinds of relevant stakeholders are active, contributing to a company's success or failure consequently the company's action.

The legal sphere does comprise all aspects of compliance towards all kind of legal or regulatory requirements. The technological sphere represents the availability and acceptance of new technologies, enabling or hindering the pace of transformation. the market sphere with all stakeholders associated to belonging to the processes of service creation service provision: Lastly, the sociocultural sphere as a home to the general public as a stakeholder group of major importance influences (together with both spheres described above) the behavior of consumers/customers and hence the change of demand in the markets. Accordingly, four Transitional Indicators (TI) can be identified as is highlighted in figure 3.

Figure 3: Modeling Transitional Intensity based on the concept of Socio-Economic Rationality



Finally, after considering physical climate risks and transition risks, other ESG risks need to be included as well, namely contributions to the loss of biodiversity, other environmental risks, human rights issues, and other social risks.

To assess the extent and severity of ESG risks, the Risk Radar uses a scoring scheme of a total of 5 levels ranging between 0 and 4:

- 0. A development/risk is **theoretical** and will only in very isolated cases cause damage
- 1. A development/risk is already **perceptible** and will cause some damage in individual cases (which, as a mean, can be minor)
- 2. A development/risk is **obvious** and must be harmful to business
- 3. A development/risk is **significant**, causing serious and extensive damage
- 4. A development/risk is **existential**, the potential damage is very high and can be fatal for many companies within the sector

For both *physical climate risks* and *transition risks* this scoring is applied, rating the individual relevance to the given sector. It results in a 0-4 score which is calculated as a mean of the different components, each of which is generated by a differentiated subscoring (as will be described in detail in chapter 3.3).

For *other ESG risks*, a more global approach is chosen with no sub-scorings. Here, each risk category can add a penalty between 0 and 1, where the keywords described above remain the same but are translated into 0.25 steps (via division by 4). For example, if there are perceptible problems in the area of biodiversity for a sector, the rating would be 0.25. If the problems are significant, 0.75 would be the appropriate score.

With each of the three pillars of ESG-risk – physical climate risk, transition risk and other ESG risks –contributing up to 4 score points, each can make up for up to a third of the total score which has a maximum of 12 score points as shown below.

Figure 4: The Scoring Table of the Risk Radar

NACE Code	Sector Name		Sco	oring		Reference	
	Physical	Acute		0-4, Weight	0.4	1	
	Climate Risk	Chronic		0-4, Weight	50%	0-4	2
		GHG-Emission	Contribution	0-4, Weight	50%		3
			Probability of regulatory Change	0-4, Weight 25%		0-4	4
	Transition Climate Risk	Transitional	Economic Impact of regulatory Change	0-4, Weight 25%	0-4,		5
			Technological Change	0-4, Weight 25%	Weight 50%		6
			Customer Behavior	0-4, Weight 25%			7
		Loss of Biodive	rsity	Add-on Factor	0-1		8
	Other ESG	Other Environr	mental Risks	Add-on Factor	0-1	0-4	9
	Risks	Possible Huma	n Rights Issues	Add-on Factor	0-1	U-4	10
		Other Social Ri	sks	Add-on Factor	0-1		11
		0-12					

This scoring is applied for all economic sectors of a country. Here, the sector classification scheme NACE is used as are the corresponding sector codes (Eurostat 2008). Wile for the most part the assessment is focused on the parental sector, for high-risk sectors such as "A Agriculture" and "C Manufacturing" also some subsectors are assessed.

The assessment is conducted in a knowledge-based approach, starting with an initial desk research followed by a review of local experts. For those sectors that have been identified as critical (risk sector scores of 6 and higher), more detailed sector profiles are provided using the reference on the right of the scoring scheme to give more detailed explanations and sources for the assessment.

For the first version of the Risk Radar, the explanation above is a comprehensive outline of the process and its results. To add depth and reduce subjectivity, however, a second version of the concept now uses sub-scorings which are described below.

3.3 Introduction of Sub-Scorings

For the first version of the Risk Radar, every item on the scoring table (see figure 4 above) was researched and then – using the 5 levels – assessed based on the identified sources. This process has required a considerable level of expertise and, at the same time, still has remained somewhat arbitrary: In fact, the assessment of the significance of a criterion and the degree of influence was not always objective. Thus, two independent observers would not necessarily come to the same conclusion every time. Since this agreement between independent researchers is an important criterion for a tool that meets scientific requirements, the methodology of the Risk Radar was now fundamentally expanded to achieve a greater degree of objectivity and precision.

Hence, for every mayor item on the scoring table a sub-scoring was defined. This sub-scoring replaces the necessity to individually assess and evaluate the parameter value of an item by checking a sequence of indicators. The basic principle is to pose and answer a question that comprises the essence of the topic at hand and from there to specify the result further by the comparison with a predefined set of indicators.

On the example of the sub-scoring for the assessment of physical climate risks in their acute form, the essential question is "Are acute climate events in the country/region already relevant for the sector under consideration?". If the answer is "no", then a second question is used to further grade this outcome: "Is it likely that this relevance will be given in the future?" defines whether the total outcome of this item in the main scoring table is "0" ("no"), 0.5 ("yes") or "1.0" (yes, very likely").

However, if the answer to the essential question is "yes", the result is further specified by checking a set of indicators. The fact that these indicators are predefined makes it easier for the assessor in that she/he does not have to come up with the relevant criteria to consider the important aspects of the topic on their own. At the same time, the standardization leads to better objectivity and standardization if different assessors consider the same sector. To achieve this, it was very important in the design process to identify all the relevant aspects so that no important criterion is omitted.

The impact of each criterion on the scoring results has been reconsidered as well, it now depends on two drivers: The quality of the source and the predefined weight. The former is another important consideration that was introduced in version 2 of the Risk Radar. It follows the logic that not all sources that come up in the research process have the same credibility. It is self-explanatory that a source like the official statement of a ministry has a completely different implication on the evaluation of a topic then a blog-entry of a private person has. However, even a blog-entry can shed light on a topic that for some reasons may not be covered in official sources for the time being. So, both sources should be considered, but with a different impact on the final score.

Hence, a new approach used in the sub-scorings first differentiates between the nature and quality of the source and then the message it conveys regarding the presence of the respective indicator (see figure 5).

As for the nature of the source, 3 categories are defined:

- Category 1 comprises newspaper articles, NGO-sources, private blogs and other publications that are not subject to reliable quality control.
- Category 2 comprise sources with a high level of acceptance and quality control, e.g., official announcements and scientific sources.
- Category 3 now is the highest level of credibility that can only be found in laws or directives, studies of governmental institutions or peer reviewed scientific sources.

In all these cases, it is further distinguished whether the indicator at hand is just confirmed in the source or whether its relevance is strongly pronounced.

The combination of both aspects leads to the following methodology in which each item on the scoring list can receive a value between 0.5 and 1:

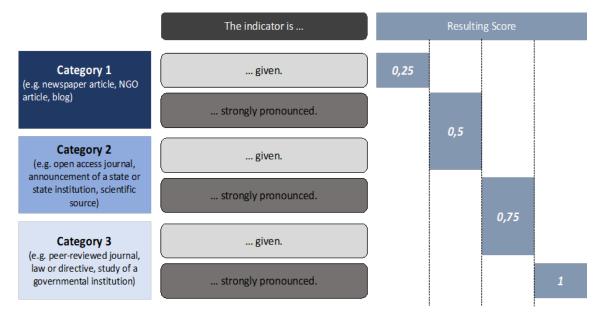


Figure 5: Scoring Values for the Indicators in the Sub-Scoring

This scoring result is then further weighted, because not every indicator can be considered equally important for the overall result. For example, a certain fact should always have a higher weight for the assessment if it is given within the country of consideration than if it would happen in another country.

For the weighting, a total multiplier value of 6 (for 6 indicators) is distributed individually to the indicators. If for instance, indicator 1 is assigned a weight of 2, for the remaining 5 indicators only a total value of 4 can be assigned. Please note that weightings are only used if there are strong arguments for an increased or reduced importance of an indicator, otherwise an equal weighting will be applied.

In addition to the 6 indicators, a "Local expert grading" can adjust the score by 0.5 (subtracting or adding) to consider local knowledge that may not have been sufficiently covered in the sources.

PLEASE NOTE: Even if the sum of all indicators and gradings exceed the value of 4, the maximum scoring result of the sub-scoring remains 4. With reference to the scoring scheme, 4 means "A development/risk is existential, the potential damage is very high and can be fatal for many companies within the sector". This is the highest value and cannot be exceeded, neither in the total score nor on the level of the sub-scorings.

Based on these considerations, sub-scorings for the following items of the main scoring table (figure 4) have been defined:

- Physical Climate Risk: Acute
- Physical Climate Risk: Chronic
- Transition Climate Risk: GHG-Emission Contribution
- Transition Climate Risk: Transitional Intensity; Probability of Regulatory Change
- Transition Climate Risk: Transitional Intensity; Impact of Regulatory Change
- Transition Climate Risk: Transitional Intensity; Technological Change
- Transition Climate Risk: Transitional Intensity; Customer-Behavior

3.4 Sub-Scoring for Physical Climate Risk: Acute

As has been mentioned in the example above, the assessment of the physical climate risk in its acute form follows the essential question "Are acute climate events in the country/region already relevant for the sector under consideration?". The grading of the "no" answer is guided by the question "Is it likely that this relevance will be given in the future?".

The differentiation of the "yes" answer is achieved by the consideration of the following six indicators:

- 1. Observed loss of assets/property
- 2. Expected impact on revenue



- 3. Expected impact on costs
- 4. Indicators 1-3 expected to increase in the future
- 5. Lack of adaptability of the business model
- 6. Sectors in the supply chain have a score >2.5 for acute climate risks

All indicators are considered to have the same impact on the total result und thus receive an equal weight of 1.

With regard to indicator number 6, additional explanation is required. While in the scoring logic of the Risk Radar each sector is essentially considered on its own, there are nevertheless aspects of climate-related risks and ESG risks where influencing factors can be "contagious". For example, in the past events have occurred when nuclear power plants had to be temporarily shut down because – due to climatic reasons – the water required of the cooling of the reactor was either lacking or too hot. This in turn has affected other energy-intense sectors via increases of the electricity price. Likewise, when low river levels hinder inland navigation, manufacturing industries, e.g., in the chemical sector, may be affected as well.

This "risk contagion" between sectors is considered with the following systematic: If other sectors along the supply chain (upstream or downstream), that have a strong connection with the sector under consideration, have a high score for the same risk category (in this case acute climate risk), the sector under consideration receives a malus depending on the level of the risk score of the connected sector:

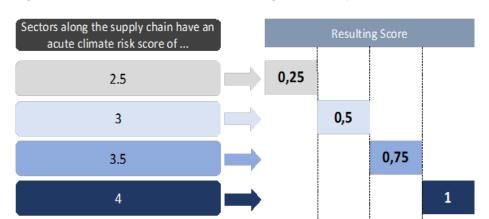


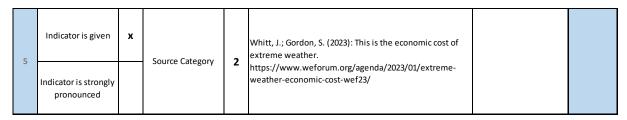
Figure 6: Consideration of Sectors along the Supply Chain

This logic of mutual influence between sectors is also a new feature of version 2 of the Risk Radar. It introduces a more networked and systematic perspective which is a strong feature of climate-related and ESG risk.

Using the reference numbers on the sidebar of the scoring table, the value of the indicators is further detailed. For example, the indicator with the reference number 5 could be detailed

in the following manner, both indicating the source quality/ category and the level of pronunciation of the indicator at hand:

Figure 7: Example of Indicator Reference



Please note that this level of detail is only given for the high-risk sectors, for which individual scoring sheets are provided.

Combining all of these aspects, the sub-scoring for "Physical Climate Risk: Acute" reads as follows:

Figure 8: Physical Climate Risk: Acute

NACE Code	Sector Name Are acute	clir	nate events ir	e country/region already		Reference			
					nder consideration?	Score	Weight	Total	
			Is it likely		"No"	Score	Weight	Total	
	"No"		that this relevance will be given in the future?		"Yes"	+0,5	1,00		1
					"Yes, very likely"	+1	1,00		1
			Obse	rved	loss of assets/property	see score mechanics	1,00		2
			Expected impact on revenue		see score mechanics	1,00		3	
			E	xpec	ted impact on costs	see score mechanics	1,00		4
	"Yes"		1-3 exp	ecte	d to increase in the future	see score mechanics	1,00		5
			Lack of ac	lapta	bility of the business model	see score mechanics	1,00		6
				Sectors in the supply chain have a score >2.5 for acute climate risks (see table below)		see score mechanics	1,00		7
					ng (score-modification between 5, see commentary below)	see score mechanics	+/-		8
					Acute Climate Risk Score	at Secto	r-Level:	0,0	Max. 4

As can be seen in the sub-scoring above that after the six indicators there is an additional item reserved for a "fine tune" of local expertise. In the first version of the Risk Radar, evaluation workshops involving local experts have been used to evaluate and, if necessary, correct the assessment of the desk research. This was especially important, as the subjectivity embedded in the process could easily lend to the omission of important aspects.

Now in the new version, the combination of predefined indicators with the consideration of quality and pronunciation of the sources has significantly reduced the level of subjectivity. Nevertheless, local expertise is an important factor as it enriches the written sources by experience. Thus, this item on the scoring table should be used to modify the total score if the result is deemed too low or too high in the opinion of the expert. This grading option is offered in every sub-scoring.

3.5 Sub-Scoring for Physical Climate Risk: Chronic

Likewise, the assessment of this item follows the essential question "Are chronic climate developments in the country/region already relevant for the sector under consideration?". The grading of the "no" answer is again guided by the question "Is it likely that this relevance will be given in the future?". The differentiation of the "yes" answer considers the same six indicators:

- 1. Observed loss of assets/property
- 2. Expected impact on revenue
- 3. Expected impact on costs
- 4. Indicators 1-3 expected to increase in the future
- 5. Lack of adaptability of the business model
- 6. Sectors in the supply chain have a score >2.5 for acute climate risks

Again, all indicators are considered to have the same impact on the total result und thus receive a weight of 1.

Figure 9: Physical Climate Risk: Chronic

Sector Name Are chronic	Sector Name Are chronic climate developments in the country/region						Reference
already re	elevant for the se	ecto	r under consideration?	Score	Weight	Total	
	Is it likely		"No"				
"No"	that this relevance will be given in		"Yes"	+0,5	1,00	0,00	1
	the future?		"Yes, very likely"	+1	1,00	0,00	1
	Observ	ved	loss of assets/property	see score mechanics	1,00		2
	Ехре	Expected impact on revenue			1,00		3
	Ехр	pect	ted impact on costs	see score mechanics	1,00		4
"Yes"	1-3 expe	ecte	d to increase in the future	see score mechanics	1,00		5
	Lack of ada	apta	bility of the business model	see score mechanics	1,00		6
	Sectors in the supply chain have a score >2.5 for acute climate risks (see table below)		see score mechanics	1,00		7	
		Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-		8
			Chronic Climate Risk Score	at Secto	r-Level:	0,0	Max. 4

3.6 Sub-Scoring for Transition Climate Risk: GHG-Emission Contribution

This sub-scoring is unique in the scoring tables, as it does not rely on indicators. Instead, it uses the percentage of the sector emissions (X) of the total emissions of the country as essential question.

PLEASE NOTE: Instead of the use of a relative share of the countries emissions alone, this could be relativized based on the contribution of the respective sector to the country's Gross Domestic Product (GDP). This would offer an additional perspective as it includes the importance of the sector to the country's economy.

Figure 10: Transition Climate Risk: GHG-Emission Contribution

Sector Name Assignment of	Assignment of a score depending on the percentage of the					Reference
	ons (X) of the to	Percentage-Range	Total			
			4.0			
	10	ı% >	X ≥ 7.5%		3.5	
	7.	5%	> X ≥ 5%		3.0	
	5		2.5			
	19		2.0			
	0.59	% >	X ≥ 0.25%		1.5	
Do sector	"No"		Add-on Factor 0		0.0	
activities have a negative impact	"Yes"		Add-on Factor 0.5		0.5	
on carbon sinks?	"Yes, severely"		Add-on Factor 1		1.0	
Are sectors in the supply	"No"		Add-on Factor 0		0.0	
chain assessed with significant	"Yes, score 3 emissions"		Add-on Factor 0.25		0.25	
or existential emissions?	"Yes, score 4 emissions"		Add-on Factor 0.5		0.5	
	G	HG-	-Emission Contribution Score	at Sector-Level:	0,0	Max. 4

In addition to the emission contribution, in this sub-scoring there are two additional questions. The first reads: "Do sector activities have a negative impact on carbon sinks?" and it refers to the change of land use and the destruction of carbon sinks that goes along with it. Accordingly, there is a malus between 0 and 1 for this aspect.

The second question is: "Are sectors in the supply chain assessed with significant or existential emissions?". In a manner similar to the consideration of sectors along the supply chain (see above figure 6) but reduced to a more compact form, there is a malus of 0.25 to

0.5 for a connection with sectors that have been assessed with results of 3 or 4 in this subscoring. This reflects the consideration of scope 3 emissions.

3.7 Sub-scoring for Transition Climate Risk: Transitional Intensity; Probability of Regulatory Change

Here, the scheme of the sub-scoring returns to its standard form. The essential question reads "Is the business case of the sector under consideration likely to be affected by regulatory change (now/ near future)?". In this sense, "affected" comprises all positive or negative consequences that a company may have in the wake of an ESG-related regulation.

The grading question for the "no" answer is: "Is this kind of regulation already present in other relevant countries?". Please note that for this and the following sub-scorings there are 4 grading questions for the "no" answer, resulting in an outcome between 0 and 1.5. The reason for this greater differentiation is: Within the field of transition risks not only events and situations in the country under consideration are contributing towards change and transformation, but events in other relevant countries as well. Here, the question whether another country should be considered as a "relevant" country depends on a combination of political, cultural, and economic ties between countries. Hence, more important than the geographical distance is the level of influence and connectivity between the countries.

The indicators for the "yes" answer to the essential question are defined as follows:

1. Announced in the country under consideration

Please note: The term "announced" refers to the formal public communication of a proposed or newly enacted law or regulation. This announcement is typically made by the government, legislative body, or relevant authority responsible for creating and implementing the legislation. The purpose of announcing new legislation is to inform the public, stakeholders, and relevant organizations about the changes in the law and its implications.

- 2. Established in the country under consideration
- 3. Further extension of this very regulation announced
- 4. Announced in other relevant countries
- 5. Established in other relevant countries
- 6. Perceived pressure of the population i.e. in the context of catastrophes or severe economic losses

Figure 11: Transition Climate Risk: Transitional Intensity; Probability of Regulatory Change

NACE Code	Sector Name	oss care of the sect	Scoring			Reference	
			or under consideration likely change (now/ near future)?	Score	Weight	Total	
		Is this kind of	"No"				
	"No"	regulation already present in	"Yes, it is planned"	+0.5	1,00		
	NO	other relevant	"Yes, it is established"	+1.0	1,00		1
		countries?	"Yes, it is established and a further extention is planned"	+1.5	1,00		
		Announced in	the country under consideration	see score mechanics	1,00		2
		Established in	the country under consideration	see score mechanics	2,00		3
		Further extension	n of this very regulation announced	see score mechanics	0,50		4
	"Yes"	Announce	d in other relevant countries	see score mechanics	0,50		5
		Establishe	d in other relevant countries	see score mechanics	1,00		6
		•	Perceived pressure of the population i.e. in the context of catstrophes or economic losses		1,00		7
			ding (score-modification between 0.5, see commentary below)	see score mechanics	+/-		8
		Probability of	of regulatory Change Risk Score	at Secto	r-Level:	0,0	Max. 4

As a difference to the preceding sub-scoring, not all indicators are assigned the same weight. An established legislation weights higher than an announced one, and these weights should further be differentiated whether they are happening in the country under consideration or other relevant countries. Please note that the total of the weights remains at 6 for all 6 indicators.

3.8 Sub-scoring for Transition Climate Risk: Transitional Intensity; Impact of Regulatory Change

Following the assessment of the probability of regulatory change, the sub-scoring to assess its impact answers the essential question "Is it likely that the regulatory change will have an ESG-impact (in the form of opportunities, risks, costs) on the sector?".

Here, the grading question for the "no" answer combines two aspects: "Is the assessed score for "Probability of Regulatory Change" > 1.5 AND is an ESG-impact observed in other relevant countries?" If any of both are denied, the influence is assessed as 0. If both are given, depending on their level of ESG-impact (between impact assumed, impact perceived and heigh impact perceived) the grading results in a value between 0.5 and 1.5 respectively. Here, as with the term "affected", the term "ESG impact" refers to all positive or negative consequences that a company may have in the wake of an ESG-related regulation.

The first two indicators for the "yes" answer are of special importance:

- 1. Effect on the business model
- 2. Strong effect on the business model

In both cases, the "effect on the business model" refers to the impact or changes that a regulatory change may have on the fundamental structure, operations, and profitability of a business. It reflects how various internal and external elements influence the way a company conducts its activities, generates revenue, and sustains its operations. Understanding the effect on the business model is essential for assessing the consequences of transition risk. The "strong" effect includes the evaluation that effect under consideration is of particular intensity. In this context, it might come as a surprise that the weighting of the indicator "effect" is twice the weight of the "strong effect". This is because both are considered cumulative: If there is a strong effect, both indicators are given and checked, and to prevent an inflation of scores the "strong" effect was weighted to a lesser extent. Similar aspects referring to the cumulative scores are visible below with other indicators as well.

The remaining indicators are:

- 3. 1-2 expected to increase in the future (referring to the first and second indicator respectively)
- 4. 1 or 2 obvious in other relevant countries (again referring to the first and second indicator)
- 5. Impact on the value chain (i.e. the sector is a node point in the value chain and crucial for other sectors that rely on its products or services)
- 6. Lack of adaptability of the business model

Figure 12: Transition Climate Risk: Transitional Intensity; Impact of Regulatory Change

NACE Code	Sector Name Is it likely th	at the regulato	Scoring			Reference		
	(in the fo	rm of opportur		"No, probability score < 1.5 or no ESG impact assumed"	Score	Weight	Total	
		of regulato change > 1 AND an ES	5	"Yes, score > 1.5 and an ESG impact is assumed"	+0.5	1,00		
	"No"	impact is observed i		"Yes, score > 1.5 and an ESG impact is perceived"	+1.0	1,00		1
		other relevations countries		"Yes, score > 1.5 and a high ESG impact is perceived"	+1.5	1,00		
			Effect on the business model			2,00		2
		Stro	Strong effect on the business model			1,00		3
		1-2	1-2 expected to increase in the future					4
	"Yes"	1 or 2	obviou	is in other relevant countries	see score mechanics	1,00		5
			Impa	ct on the value chain	see score mechanics	0,50		6
		Lack of a	adapt	daptability of the business model		1,00		7
			_	ing (score-modification between .5, see commentary below)	see score mechanics	+/-		8
		Probab	lity of	regulatory Change Risk Score	at Secto	r-Level:	0,0	Max. 4

3.9 Sub-scoring for Transition Climate Risk: Technological Change

Without technical alternatives, no transformation is possible. For example, the abolishment of the combustion engine is only conceivable because electric mobility offers an alternative within the scope of personal transport.

The alternatives considered in this sub-scoring, however, do not always have to be strictly technical. They can also refer to processes and approaches that offer a more sustainable alternative to the conventional status quo, as is the case for example in organic farming (as an alternative to conventional farming) or in hydrogen-powered steel manufacturing.

Sometimes, however, the only sustainable alternative is to quit a certain practice or technology completely: In the tobacco-sector, for example, e-cigarettes are not a sustainable alternative. Hence, the only sustainable alternative here is to quit smoking completely. Thus, the technological change threatening that sector is an increase of the number of non-smokers.

So, this sub-scoring is based on the essential question "Is an alternative technology/methodology with sustainability-related advantages available/ used in this sector in the country under consideration?".

As with the previous indicator, the grading question for the "no" answer refers to other relevant countries; it reads: "Is this technology available/ used in this sector in other relevant countries?"

Accordingly, the indicators for the "yes" answer also include this differentiation:

- 1. Use in the country under consideration
- 2. Heavy use in the country under consideration
- 3. Use in other relevant countries
- 4. Heavy use in other relevant countries
- 5. Accepted economic benefit of technology (lower costs and/or higher yields)
- 6. Accepted strong economic benefit of technology (much lower costs and/or much higher yields)

Figure 13: Transition Climate Risk: Technological Change

NACE Code	ls an		rnative technoility-related a	Scoring			Reference		
			tor in the cour	Score	Weight	Total			
	"No"		Is this technology available/		"No" "No, to date it is just at theory/ study-level"	+0.5	1,00		
		used in this sector in other relevant		"Yes, it is available and used in other relevant countries"	+1.0	1,00		1	
			countries?		"Yes, it is heavily used in other relevant countries"	+1.5	1,00		
			Use in the country under consideration			see score mechanics	1,00		2
			Heavy use i	see score mechanics	1,00		3		
			Use	Use in other relevant countries					4
	"Yes"		Heavy (use ii	n other relevant countries	see score mechanics	1,00		5
			-	Accepted economic benefit of technology (lower costs and/or higher yields)			1,50		6
			•	_	economic benefit of technology sts and/or much higher yields)	see score mechanics	1,00		7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			see score mechanics	+/-		8
			Probability	y of	regulatory Change Risk Score	at Secto	r-Level:	0,0	Max. 4

3.10 Sub-scoring for Transition Climate Risk: Customer Behavior

The last indicator to consider is the level of acceptance of the new technology (or the willingness to adapt one's own behavior as explained as has been discussed on the example of the tobacco sector) by the customers. This is based on the essential question "Are customers accepting/demanding the new technology (see above assessment of technological change) in the country under consideration?".

Accordingly, the grading question for the "no" answer is: "Are customers accepting/demanding this very technology in other, export-relevant countries?". Here, instead of referring to various ways of cultural or political connections between countries, the focus is an economic one: If countries are connected in trade, the demand of new technologies/approaches can greatly be accelerated by the demand/preferences in the customer-country.

Figure 14: Transition Climate Risk: Customer Behavior

Code	r Name re custor	mers	s accepting/de	Scoring			Reference		
	(see a		e assessment he country ur	Score	Weight	Total			
			Are customers		"No"		20		
	"No"		accepting/ demanding this very		"Yes, the use can be recognised in its beginnings"	+0.5	1,00		
	NO		technology in other, export-		"Yes, the use can be clearly recognised"	+1.0	1,00)	1
		relevant countries?		"Yes, the strong use can be clearly recognised"	+1.5	1,00			
				Perceived benefits in costs/maintenance from the user's perspective			2,00		2
			Perceived benefits in health from the user's perspective			see score mechanics	1,00		3
					enefits in quality/durability he user's perspective	see score mechanics	1,00		4
	'Yes"		Perceived b	enet	fits to society and ecosystems	see score mechanics	0,50		5
			Mass Media _I	Mass Media presence conveying a positive image		see score mechanics	1,00		6
				VIP-Advocates			0,50		7
					ng (score-modification between 5, see commentary below)	see score mechanics	+/-		8
			Probability	y of	regulatory Change Risk Score	at Secto	r-Level:	0,0	Max. 4

The indicators for the "yes" answer focus on the different aspects that may act as a driver for customer demand:

- 1. Perceived benefits in costs/maintenance
- 2. Perceived benefits in health
- 3. Perceived benefits in quality/durability
- 4. Perceived benefits to society and ecosystems
- 5. Mass Media presence conveying a positive image
- 6. VIP-Advocates

The weighting emphasizes the fact that economic-based arguments often play a major role in customer decisions and dominate other benefit categories (summed up in the statement of a market-analyzer "ego-benefit always tops eco-benefit").

4. Overview of the Risk Radar for Armenian Economic Sectors

The ESG risk score of each economic sector is represented in Appendix 1. The figure below shows economic sectors with high risk only. The assessments and scorings of each high-risk sector is represented in Appendix 2.

Figure 15: High-risk Economic Sectors

High risk (9 points)	High risk (8 points)	High risk (7 points)
A. Agriculture, forestry and fishing	A 1.4. Animal production	A 3. Fishing and aquaculture
A 1.1. Growing of non-perennial crops	C 12. Manufacture of tobacco products	C 20. Manufacture of chemicals and chemical products
A 1.2. Growing of perennial crops	C 19. Manufacture of coke and refined petroleum products	E. Water supply;sewerage, waste management and remediation activities
A 2. Forestry and logging	D. Electricity, gas, steam and air conditioning supply	F. Construction
	H. Transportation and storage	

5. Heat Map Assessment

In passage number 36, the Basle Committee recommends: "Banks should also identify, measure, evaluate, monitor, report and manage the concentrations within and between risk types associated with climate-related financial risks. For example, banks could use metrics or heatmaps to assess and monitor concentration of exposure to geographies and sectors with higher climate-related risk" (BIS 2022, 6).

With the results of the sectors scores, it is possible to formulate such a heat map. It gives an overview over the concentrations of climate-related and other ESG risks in the loan portfolio of the bank. Such a Heat Map can be formulated for individual financial institutions or on an aggregated level for a whole country.

The heatmap enables the use of Risk Radar results (identified sectoral risks) for the assessment of risks to the financial system, particularly the credit risk. The heatmap was developed based on the volumes of loans granted to residents in Armenia, as of March 2024.

The findings indicate that approximately 15.38% of the banking system's loans are allocated to sectors at high risk (see Figure 31). These loans are directed to economic sectors with high-risk scores of 7, 8, and 9. Nearly 40% of loans are distributed to sectors that encompass not only high-risk categories (scores 7, 8, and 9) but also vulnerable sectors (scores 5 and 6). Heatmaps can be utilized by financial organizations with both small and large portfolios. This tool offers an initial overview of the extent to which financial organizations are exposed to climate risks. For a more detailed risk assessment at the client level, specific assessment modifiers can be defined for each sector, using a short questionnaire. This approach allows for analyzing the degree to which a given company is exposed to the same risk as its sector, and whether this risk exposure is equivalent. Consequently, both restrictions and implications for pricing and collateral requirements can be established for borrowers, further enhancing the comprehensiveness of the ESG risk management process.

Figure 16: RISK RADAR AND HEATMAP

	Construction	5,33%	
7-9	Agriculture. Growing of non-perennial crops	3,96%	16,25%
	Agriculture. Growing of perennial crops	2,95%	
	Financial and insurance activities	6,91%	
5-6	Manufacture of food products	1,7%	12,94%
	Accommodation and food service activities	1,75%	
	Wholesale and retail trade	8,02%	
3-4	Real estate activities	0.41%	9,79%
	Information and communication	0.33%	
	Professional, scientific and technical activities	0.52%	
1-2	Education	0.12%	3,4%
	Other service activities	2,76%	
	Unrated (Retail)	57,63%	57,63%



Loan Portfolio Volume 2,289,929,232 thousand AMD

Appendix 1

		ESG-Risk Sector-Score													
<u>e</u>		Physical Climate Risk			Transition Climate Risk						Other ESG-Risks				
NACE-Code	Sector		Chronic	Σ	GHG-Emission Contribution	Probability of regulatory Change	Economic Impact of	Technology Squeeze-out	Customer/ Consumer Behavior	Σ	Loss of Biodiversity	Other Environmental Risks	Possible Violation of Human Rights	Other Social Risks	ΣΣ
A	Agriculture, Forestry and Fishing	3.0	3.5	3.25	4.0	2.0	2.0	1.5	1.0	2.81	1.00	0.75	0.50	0.50	2.8 9
A 1.1	Growing of non-perennial Crops	3.0	3.5	3.25	4.0	2.0	2.0	1.5	1.0	2.81	1.00	0.50	0.50	0.50	2.5 9
A 1.2	Growing of perennial Crops	3.0	3.5	3.25	4.0	2.0	2.0	1.5	1.0	2.81	1.00	0.75	0.50	0.50	2.8 9
A 1.4	Animal Production	3.0	3.5	3.25	4.0	2.0	2.0	1.5	1.0	2.81	0.75	0.50	0.50	0.50	2.3 8
A 2	Forestry and Logging	3.0	3.5	3.25	4.0	2.0	2.5	1.5	0.5	2.81	1.00	0.75	0.50	0.50	2.8 9
A 3	Fishing and Aquaculture	2.5	3.0	2.75	4.0	1.0	0.0	1.0	0.5	2.31	0.75	0.50	0.50	0.50	2.3 7
В	Mining and Quarrying	3.0	2.5	2.75	3.5	2.5	1.5	0.5	0.0	2.31	1.00	0.75	0.75	0.75	3.3 8
С	Manufacturing														
C 10	Manufacture of Food Products	2.0	2.5	2.25	2.0	2.0	1.0	1.0	1.0	1.63	0.75	0.50	0.50	0.50	2.3 6
C 11	Manufacture of Beverages	1.5	2.0	1.75	2.0	2.0	1.0	1.0	1.0	1.63	0.75	0.50	0.00	0.50	1.8 5
C 12	Manufacture of Tobacco Products	2.0	2.5	2.25	3.0	2.5	2.5	2.0	3.0	2.75	1.00	0.50	0.75	1.00	3.3 8
C 13	Manufacture of Textiles	1.5	1.5	1.50	2.5	2.0	1.0	0.5	0.5	1.75	0.75	0.50	0.50	0.50	2.3 6
C 14	Manufacture of wearing Apparel	1.0	1.5	1.25	2.0	1.0	1.0	0.5	0.5	1.38	0.75	0.50	0.50	0.50	2.3 5
C 15	Manufacture of Leather and related Products	1.0	1.5	1.25	2.0	2.0	1.0	0.5	0.5	1.50	0.25	0.50	0.50	0.50	1.8 5
C 16	Manufacture of Wood and of Products of Wood and Cork, except Furniture; Manufacture of Articles of Straw and Plaiting Material	1.5	1.5	1.50	2.0	1.0	1.0	0.0	0.0	1.25	1.00	0.50	0.00	0.50	2.0 5

C 17	Manufacture of Paper and Paper Products	1.5	2.0	1.75	2.5	2.0	1.5	1.0	1.0	1.94	0.75	0.50	0.00	0.50	1.8	5
C 18	Printing and Reproduction of Recorded Media	1.0	1.0	1.00	1.0	1.0	1.0	1.0	1.0	1.00	0.75	0.00	0.00	0.00	0.8	3
C 19	Manufacture of Coke and refined Petroleum Products	2.5	2.5	2.50	3.5	3.0	2.5	3.0	2.0	3.06	0.50	0.75	0.50	0.50	2.3	8
C 20	Manufacture of Chemicals and chemical Products	3.0	2.5	2.75	3.5	2.5	1.0	1.0	1.0	2.44	0.50	0.75	0.50	0.50	2.3	7
C 21	Manufacture of basic pharmaceutical Products and pharmaceutical Preparations	2.0	2.5	2.25	2.0	2.0	1.0	0.0	0.5	1.44	0.50	0.50	0.00	0.50	1.5	5
C 22	Manufacture of Rubber and plastic Products	1.0	1.0	1.00	4.0	2.0	1.0	0.5	1.0	2.56	0.50	0.50	0.00	0.50	1.5	5
C 23	Manufacture of other non-metallic mineral Products	1.5	1.5	1.50	3.0	2.0	1.0	0.5	0.5	2.00	0.50	0.50	0.00	0.50	1.5	5
C 24	Manufacture of basic Metals	1.0	1.0	1.00	4.0	2.0	1.5	0.0	0.5	2.50	0.75	0.50	0.00	0.50	1.8	5
C 25	Manufacture of fabricated metal Products, except Machinery and Equipment	1.0	1.0	1.00	4.0	2.0	1.5	0.5	0.5	2.56	0.75	0.50	0.00	0.50	1.8	5
C 26	Manufacture of Computer, electronic and optical Products	1.0	1.0	1.00	2.0	1.0	1.0	0.0	0.5	1.31	0.75	0.50	0.00	0.00	1.3	4
C 27	Manufacture of electrical Equipment	1.0	1.0	1.00	2.0	1.0	1.0	0.0	0.5	1.31	0.50	0.50	0.00	0.00	1.0	3
C 28	Manufacture of Machinery and Equipment	1.5	1.5	1.50	2.0	2.0	1.0	0.0	0.0	1.38	0.50	0.50	0.00	0.50	1.5	4
C 29	Manufacture of Motor Vehicles, Trailers and semi-Trailers	2.0	1.5	1.75	2.0	2.0	2.5	2.0	2.0	2.06	0.50	0.75	0.50	0.75	2.5	6
C 30	Manufacture of other Transport Equipment	1.5	1.5	1.50	2.0	2.0	1.0	0.0	0.5	1.44	0.50	0.50	0.50	0.50	2.0	5
C 31	Manufacture of Furniture	1.0	1.0	1.00	2.0	1.0	1.0	0.0	0.0	1.25	0.50	0.25	0.00	0.00	0.8	3
C 32	Other manufacturing	1.0	1.0	1.00	2.0	2.0	1.0	0.0	0.5	1.44	0.75	0.50	0.00	0.00	1.3	4
C 33	Repair and installation of Machinery and Equipment	1.0	1.0	1.00	1.0	1.5	1.5	0.0	0.0	###	0.50	0.50	0.00	0.00	1.0	3
D	Electricity, Gas, Steam and Air Conditioning Supply	2.5	2.5	2.50	4.0	3.5	2.5	3.0	2.5	3.44	0.75	0.75	0.50	0.50	2.5	8
Е	Water Supply, Sewerage, Waste Management and Remediation Activities	1.5	2.5	2.00	3.0	3.5	2.0	1.5	2.0	2.63	0.50	0.75	0.50	0.50	2.3	7

F	Construction	2.0	2.0	2.00	3.0	2.5	1.5	1.5	2.0	2.44	0.75	0.50	0.75	0.75	2.8	7
G	Wholesale and Retail Trade	1.0	1.0	1.00	1.0	0.5	0.25	0.0	1.0	0.72	0.75	0.00	0.00	0.50	1.3	3
Н	Transportation and Storage	3.0	3.0	3.00	4.0	2.0	1.50	1.0	0.5	2.63	0.75	0.75	0.50	0.75	2.8	8
I	Accommodation and Food Service Activities	2.0	2.0	2.00	1.5	1.0	1.0	1.0	1.0	1.25	0.50	0.50	0.00	0.50	1.5	5
J	Information and Communication	2.0	1.0	1.50	1.0	0.0	0.0	0.0	0.0	0.50	0.25	0.50	0.00	0.25	1.0	3
K	Financial and Insurance Activities	2.0	2.0	2.00	2.0	2.0	2.5	1.0	1.0	1.81	0.25	0.50	0.00	0.50	1.3	5
L	Real Estate Activities	1.5	1.5	1.50	1.5	1.5	1.0	1.0	0.5	1.25	0.50	0.00	0.00	0.25	0.8	4
М	Professional, Scientific and Technical Activities	1.0	1.0	1.00	1.0	0.0	0.0	0.5	0.5	0.63	0.50	0.00	0.00	0.00	0.5	2
N	Administrative and Support Service Activities	1.0	1.0	1.00	1.0	0.0	0.0	0.0	0.0	0.50	0.50	0.00	0.00	0.00	0.5	2
0	Public Administration and Defence, Compulsory Social Security	1.0	1.0	1.00	1.0	0.0	0.0	0.0	0.0	0.50	0.25	0.00	0.00	0.00	0.3	2
Р	Education	1.0	1.0	1.00	1.0	1.0	0.0	0.0	0.0	0.63	0.25	0.00	0.00	0.00	0.3	2
Q	Human Health and Social Work Activities	2.0	2.0	2.00	1.0	0.0	0.0	0.0	0.25	0.53	0.25	0.50	0.25	0.50	1.5	4
R	Arts, Entertainment and Recreation	1.0	1.0	1.00	1.0	0.0	0.0	0.0	0.0	0.50	0.75	0.50	0.00	0.50	1.8	3
S	Other Service Activities	1.0	1.0	1.00	1.0	0.0	0.0	0.0	0.0	0.50	0.25	0.00	0.00	0.00	0.3	2
Т	Activities of Households as Employers	1.0	1.0	1.00	1.0	0.0	0.0	0.0	0.0	0.50	0.75	0.25	0.00	0.50	1.5	3
U	Activities of Extraterritorial Organisations and Bodies	1.0	1.0	1.00	1.0	0.0	0.0	0.0	0.0	0.50	0.25	0.00	0.00	0.00	0.3	2

Appendix 2

A. Agriculture, Forestry and Fishing

Growing of non-perennial crops

Total Score

A 1.1	Agriculture, For	restry and Fishing	- growing of non-	Scoring			Reference				
	Physical	Acute		3.0			1				
	Climate Risk	Chronic		3.5		3.3	2				
		GHG-Emission Con	tribution	4.0			3				
			Probability of regulatory Change	2.0		2.81	4				
	Transition Climate Risk	Transitional Intensity	Economic Impact of regulatory Change	2.0	1.6		5				
			Technological Change	1.5			6				
			Customer Behavior	1.0			7				
		Loss of Biodiversity		Add-on Factor	1.00		8				
	Other ESG	Other Environment	Add-on Factor	0.5	2.5	9					
	Risks	Possible Human Rig	thts Issues	Add-on Factor	0.5	2.5	10				
		Other Social Risks		Add-on Factor	0.5		11				
	ESG-Risk Score a	ESG-Risk Score at Sector-Level:									

Acute Climate Risk

A 1.1	Agricu	ltur	e, Forestry and Fishing - growing of non-	-pe	rennial crops	Scorin	g		Reference			
			climate events in the country/region alrunder consideration?	eac	ly relevant for							
					"No"	Score	Weight Total					
	"No"		Is it likely that this relevance will be given in the future?		"Yes"		1.00	0.00				
					"Yes, very likely"		1.00	0.00	1			
			Observed loss of assets/property			0.50	1.00	0.50	2			
			Expected impact on revenue			0.50	1.00	0.50	3			
		"Yes" x	"Yes" x	"Yes" x	"Yes" x	Expected impact on costs			0.75	1.00	0.75	4
	"Yes"					"Yes" x	"Yes" x	"Yes" x 1-3 expected to increase in the future		0.50	1.00	0.50
			Lack of adaptability of the business mod	del		0.75	1.00	0.75	6			
			Sectors in the supply chain have a score >2.5 for acute climate risks (see table below)		>2.5 for acute	0.00	1.00	0.00	7			
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8				
	Acute	Clin	nate Risk Score at Sector-Level:					3.0	Max. 4			

Chronic Climate Risk

A 1.1	Agricul	ture	e, Forestry and Fishing - growing of non-po	erei	nnial crops				Reference
	Are chi	onic	c climate developments in the country/regi	on a	already relevant	Scoring	g		
	for the	sect	or under consideration?			Score	Weight	Total	
					"No"	Score	Weight	Total	
	"No"		Is it likely that this relevance will be given in the future?		"Yes"		1.00	0.00 1 0.50 2 0.75 3	1
					"Yes, very likely"		1.00	0.00	1
			Observed loss of assets/property			0.50	1.00	0.50	2
			Expected impact on revenue			0.75	1.00	0.75	3
		es" x	Expected impact on costs		0.50	1.00	0.50	4	
	"Yes"		x 1-3 expected to increase in the future		0.75	1.00	0.75	5	
			Lack of adaptability of the business mode	:l		0.75	1.00	0.75	6
			Sectors in the supply chain have a sci climate risks (see table below)			0.00	1.00	0.00	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)				+/-	0.00	8
	Chroni	c Cl	imate Risk Score at Sector-Level:					3.5	Max. 4

GHG Emissions

Agriculture, Forestry and F	ishing - growing of non	-per	ennial crops	Scoring	centage-			
Assignment of a score de		entag	e of the sector	beomig				
emissions (X) of the total er	nissions of the country			Percentage- Range	Total			
X ≥ 10%			x	4.00				
10% > X ≥ 7.5%	$10\% > X \ge 7.5\%$							
7.5% > X ≥ 5%								
5% > X ≥ 1%								
1% > X ≥ 0.5%								
0.5% > X ≥ 0.25%	6							
			•	•				
	"No"		Add-on Factor					
Do sector activities have a negative impact on carbon sinks?	"Yes"		Add-on Factor 0.5					
	"Yes, severely"	x	Add-on Factor		1.00			
Are sectors in the supply	"No"		Add-on Factor					
chain assessed with significant or existential emissions?			Add-on Factor 0.25					
emissions:	"Yes, score 4 emissions"		Add-on Factor 0.5					
GHG-Emission Contribution	n Score at Sector-Level	:			4.0	Max. 4		

Probability of Regulatory Change

A 1.1	Agricu	ıltur	e, Forestry and Fishing - growin	ng of non-perennial crops	Saorin	-		Reference		
			usiness case of the sector		Scorin	š				
	to be a	ffec	ted by regulatory change (now/	near future)?	Score	Weight	Total			
				"No"						
	"No"		Is this kind of regulation already present in other	"Yes, it is planned"		1.00				
	110		relevant countries?	"Yes, it is established"		1.00	0.00	1		
				"Yes, it is established and a further extention is planned"		1.00				
			Announced in the country unc	ler consideration	0.75	1.00	0.75	2		
			Established in the country und	er consideration		2.00	0.00	3		
			Further extension of this very	regulation announced	0.00	0.50	0.00	4		
	"Yes"	x	x	s" x	Announced in other relevant o	countries	0.50	0.50	0.25	5
			Established in other relevant c	ountries	0.75	1.00	0.75	6		
			Perceived pressure of the pop catastrophes or severe econom			1.00	0.00	7		
			Local expert grading (so -0.5 and +0.5, see commentary	core-modification between below)		+/-	0.00	8		
	Probal	oilit	y of regulatory Change Risk Sco	re at Sector-Level:			2.0	Max. 4		

Economic Impact of Regulatory Change

A 1.1	Agricu	ıltur	e, Forestry and Fishing - growing of no	n-perennial crops	Ci	_		Reference
			that the regulatory change will have a	an ESG-impact (in the	Scoring	g 		
	form o	f op	portunities, risks, costs) on the sector?					
				"No, probability score < 1.5 or no ESG impact assumed"	Score	Weight	Total	
	"No"		Is the assessed score for "Probability of Regulatory Change" > 1.5 AND is an ESG-impact	"Yes, score > 1.5 and an ESG impact is assumed"		1.00		
			observed in other relevant countries?	"Yes, score > 1.5 and an ESG impact is perceived"		1.00	0.00	1
				"Yes, score > 1.5 and a high ESG impact is perceived"		1.00		
	Stro		Effect on the business model		0.75	2.00	1.50	2
		Strong effect on the business model		0.00	1.00	0.00	3	
			1-2 expected to increase in the future		0.00	0.50	0.00	4
	"Yes"	x	1 or 2 obvious in other relevant countr	ries	0.50	1.00	0.50	5
			Impact on the value chain		0.00	0.50	0.00	6
			Lack of adaptability of the business mo	odel	0.00	1.00	0.00	7
			Local expert grading (score-motor) -0.5 and +0.5, see commentary below)	odification between	0.00	+/-	0.00	8
	Impac	t of	regulatory Change Risk Score at Sector-	Level:			2.0	Max. 4

Technological Change

A 1.1	Agricu	ıltuı	re, Forestry and Fishing - growing of	non-perennial crops	Scoring	σ.		Reference
	Is sustair	ar nabi	n alternative technology/i lity-related advantages	methodology with available/used	Scoring	5		
			tor in the country under consideratio		Score	Weight	Total	
				"No"		3		
				"No, to date it is just at theory/ study-level"		1.00		
	"No"		Is this technology available/used in this sector in other relevant countries?	"Yes, it is available and used in other relevant countries"		1.00	0.00	1
				"Yes, it is heavily used in other relevant countries"		1.00		
			Use in the country under considera	tion	0.50	1.00	0.50	2
			Heavy use in the country under cor	nsideration	0.00	1.00	0.00	3
			Use in other relevant countries		0.50	0.50	0.25	4
	"Yes"	x	Heavy use in other relevant countri	es	0.00	1.00	0.00	5
			Accepted economic benefi (lower costs and/or higher yields)	t of technology	0.50	1.50	0.75	6
			Accepted strong economic be (much lower costs and/or much hig	<u> </u>	0.00	1.00	0.00	7
			Local expert grading (score- -0.5 and +0.5, see commentary belo	modification between w)	0.00	+/-	0.00	8
	Techn		1.5	Max. 4				

Customer Behavior

A 1.1	Agricu	ıltur	e, Forestry and Fishing - growing	of non-perennial crops	Scorin	g		Reference
	Are (see		stomers accepting/demanding above assessment of	the new technology technological change)				
	in the	cou:	ntry under consideration?	0	Score	Weight	Total	
				"No"				
	"No"		Are customers accepting/demanding this very	"Yes, the use can be recognised in its beginnings"		1.00		
	110		technology in other, export- relevant countries?	"Yes, the use can be clearly recognised"		1.00	0.00	1
				"Yes, the strong use can be clearly recognised"		1.00		
			Perceived benefits from the user's perspective	in costs/maintenance	0.00	2.00	0.00	2
			Perceived benefits from the user's perspective	in health	0.50	1.00	0.50	3
			Perceived benefits from the user's perspective	in quality/durability	0.00	1.00	0.00	4
	"Yes"	x	Perceived benefits to society and	l ecosystems	0.75	0.50	0.38	5
			Mass Media presence conveying	a positive image	0.00	1.00	0.00	6
			VIP-Advocates		0.00	0.50	0.00	7
		_	Local expert grading (sc -0.5 and +0.5, see commentary b	ore-modification between elow)		+/-	0.00	8
	Custor	ner	Behavior Risk Score at Sector-Lev	el:			1.0	Max. 4

Growing of perennial crops

Total

A 1.2	Agriculture, Forest	ry and Fishing - gro	owing of perennial crops	Scoring			Reference
	Physical Climate	Acute	3.0				1
	Risk	Chronic		3.5		3.3	2
		GHG-Emission Contribution		4.0			3
			Probability of regulatory Change	2.0			4
	Transition Climate Risk	Transitional	Economic Impact of regulatory Change	2.0	1.6	2.81	5
		Intensity	Technological Change	1.5	1.6		6
			Customer Behavior	1.0			7
		Loss of Biodiversity	7	Add-on Factor	1.0		8
	0.1 F00 P1.1	Other Environmen	tal Risks	Add-on Factor	0.75	2.0	9
	Other ESG Risks	Possible Human Ri	ghts Issues	Add-on Factor	0.5	2.8	10
		Other Social Risks		Add-on Factor	0.5		
	ESG-Risk Score at S	Sector-Level:				9	8.81

Acute Climate Risk

A 1.2	Agricu	ltur	e, Forestry and Fishing - growing of pere	nn	ial crops	Scoring Score Weight Total 1.00 0.00			Reference			
			climate events in the country/region alro	eac	ly relevant for	Scorin	g					
	the sec	tor	under consideration?			Score	Weight	Total				
					"No"							
	"No"		Is it likely that this relevance will be given in the future?		"Yes"		1.00	0.00	1			
					"Yes, very likely"		1.00	0.00	1			
			Observed loss of assets/property			0.50	1.00	0.50	2			
			Expected impact on revenue			0.75	1.00	0.75	3			
		"Yes" x	"Yes" x	"Yes" x	"Yes" x			Expected impact on costs		0.50	1.00	0.50
	"Yes"					x 1-3 expected to increase in the future		0.50	1.00	0.50	5	
			Lack of adaptability of the business mod	del		0.75	1.00	0.75	6			
		Sectors in the supply chain have a score >2.5 for acute climate risks (see table below)			>2.5 for acute		1.00	0.00	7			
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8				
	Acute	Clin	nate Risk Score at Sector-Level:					3.0	Max. 4			

Chronic Climate Risk

A 1.2	Agricul	lture	e, Forestry and Fishing - growing of pere	nnial crops				Reference					
			ic climate developments in the count	ry/region already	Scorin	g							
	relevan	t fo	r the sector under consideration?		Score	Weight	Total						
				"No"									
	"No"		Is it likely that this relevance will be given in the future?	"Yes"		1.00	0.00	1					
				"Yes, very likely"		1.00	0.00	1					
			Observed loss of assets/property		0.75	1.00	0.75	2					
			Expected impact on revenue		0.75	1.00	0.75	3					
		"Yes" x						Expected impact on costs		0.50	1.00	0.50	4
	"Yes"		Tes" x 1-3 expected to increase in the future		0.75	1.00	0.75	5					
			Lack of adaptability of the business mo	odel	0.75	1.00	0.75	6					
			Sectors in the supply chain have a score >2.5 for acute climate risks (see table below)		0.00	1.00	0.00	7					
			Local expert grading (score-modif -0.5 and +0.5, see commentary below)	ication between		+/-	0.00	8					
	Chroni	c Cl	imate Risk Score at Sector-Level:				3.5	Max. 4					

GHG Emissions

A 1.2	Agriculture, Forestry and F	ishing - growing of po	ereni	nial crops	Scoring		Reference
	Assignment of a score dep	•	_	e of the sector			
	emissions (X) of the total en	nissions of the countr	У		Percentage- Range	Total	
	X ≥ 10%				x	4.00	
	10% > X ≥ 7.5%						
	7.5% > X ≥ 5%						
	5% > X ≥ 1%						
	1% > X ≥ 0.5%						
	0.5% > X ≥ 0.25%	/o					
		"No"		Add-on Factor 0			
	Do sector activities have a negative impact on carbon sinks?	"Yes"		Add-on Factor 0.5			
		"Yes, severely"	x	Add-on Factor 1		1.00	
	Are sectors in the supply	"No"		Add-on Factor 0			
	chain assessed with significant or existential emissions?	"Yes, score 3 emissions"		Add-on Factor 0.25			
	emissions:	"Yes, score 4 emissions"		Add-on Factor 0.5			
	GHG-Emission Contribution	on Score at Sector-Lev	el:			4.0	Max. 4

Probability of Regulatory Change

A 1.2	Agricu	ltur	e, Forestry and Fishing - grov	win	g of perennial crops	a :			Reference
			siness case of the sector			Scoring	g		
	to be a	ffec	ted by regulatory change (no	w/	near future)?	Score	Weight	Total	
					"No"				
	"No"		Is this kind of regulation already present in other		"Yes, it is planned"		1.00		
	110		relevant countries?		"Yes, it is established"		1.00	0.00	1
					"Yes, it is established and a further extention is planned"		1.00		
			Announced in the country t	ınc	ler consideration	0.75	1.00	0.75	2
			Established in the country u	ınd	er consideration	0.00	2.00	0.00	3
			Further extension of this ve	ry 1	regulation announced	0.00	0.50	0.00	4
	"Yes"	x	Announced in other relevan	ıt c	ountries	0.50	0.50	0.25	5
			Established in other relevan	ıt co	ountries	0.75	1.00	0.75	6
		Perceived pressure of the population i.e. in the coordinate of catastrophes or severe economic losses Local expert grading (score-modification between 50.5 and +0.5, see commentary below)			1.00	0.00	7		
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8	
	Probab	oilit	y of regulatory Change Risk S	coı	re at Sector-Level:			2.0	Max. 4

Impact of Regulatory Change

A 1.2	Agricu	ltur	re, Forestry and Fishing - growing c	of perennial crops	Scorin	σ		Reference
			that the regulatory change will hefopportunities, risks, costs) on the		Scorin	5		
	the for	111 0	n opportunities, risks, costs) on the	"No, probability	Score	Weight	Total	
				score < 1.5 or no ESG impact assumed"		3		
	"No"		Is the assessed score for "Probability of Regulatory Change" > 1.5 AND is an ESG-	"Yes, score > 1.5 and an ESG impact is assumed"		1.00		
	140		impact observed in other relevant countries?	"Yes, score > 1.5 and an ESG impact is perceived"		1.00	0.00	1
				"Yes, score > 1.5 and a high ESG impact is perceived"		1.00		
			Effect on the business model	0.75	2.00	1.50	2	
			Strong effect on the business mod	0.00	1.00	0.00	3	
			1-2 expected to increase in the fut	cure		0.50	0.00	4
	"Yes"	x	1 or 2 obvious in other relevant co	ountries	0.50	1.00	0.50	5
			Impact on the value chain		0.00	0.50	0.00	6
			Lack of adaptability of the busines	ss model	0.00	1.00	0.00	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8
	Impact	of	regulatory Change Risk Score at Se	ctor-Level:			2.0	Max. 4

Technological Change

A 1.2	Agricu	ıltur	e, Forestry and Fishing - growing	of perennial crops	Scorin	~		Reference
	Is	an abil	alternative technology. lity-related advantages	/methodology with available/used	Scorin	B		
			for in the country under considera		Score	Weight	Total	
				"No, to date it is just at theory/ study-level"		1.00		
	"No"		Is this technology available/ used in this sector in other relevant countries?		1.00	0.00	1	
				"Yes, it is heavily used in other relevant countries"		1.00		
			Use in the country under consid	Use in the country under consideration				2
			Heavy use in the country under	consideration	0.00	1.00	0.00	3
			Use in other relevant countries		0.50	0.50	0.25	4
	"Yes"	x	Heavy use in other relevant cour	ntries	0.00	1.00	0.00	5
	1		Accepted economic bene (lower costs and/or higher yields	07	0.50	1.50	0.75	6
			Accepted strong economic (much lower costs and/or much	0,	0.00	1.00	0.00	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8
	Techn	olog	ical Change Risk Score at Sector-	Level:			1.5	Max. 4

Customer Behavior

A 1.2	Agricu	ıltur	e, Forestry and Fishing - growi	ng of perennial crops	Scorin			Reference
	Are (see		omers accepting/demanding	the new technology technological change)				
			ntry under consideration?	cermonogreur emange)	Score	Weight	Total	
				"No"				
	"No"		Are customers accepting/ demanding this very	"Yes, the use can be recognised in its beginnings"		1.00		
			technology in other, export-relevant countries?		1.00	0.00	1	
				"Yes, the strong use can be clearly recognised"		1.00		
			Perceived benefits i	in costs/maintenance	0.00	2.00	0.00	2
			Perceived benefits from the user's perspective	in health	0.50	1.00	0.50	3
			Perceived benefits from the user's perspective	in quality/durability	0.00	1.00	0.00	4
	"Yes"	x	Perceived benefits to society a	and ecosystems	0.75	0.50	0.38	5
		Mass Media presence conve		ng a positive image	0.00	1.00	0.00	6
			VIP-Advocates		0.00	0.50	0.00	7
		_	Local expert grading (score-0.5 and +0.5, see commentary			+/-	0.00	8
	Custor	ner	Behavior Risk Score at Sector-I	Level:			1.0	Max. 4

Animal Production

Total

A 01.4	Agriculture, Fore	stry and Fishing -	Animal Production	Scoring			Reference
	Physical Climate	Acute	3.0			1	
	Risk	Chronic		3.5		3.3	2
		GHG-Emission Contribution		4.0			3
			Probability of regulatory Change	2.0			4
	Transition Climate Risk	Transitional Intensity	Economic Impact of regulatory Change	2.0		2.81	5
			Technological Change	1.5	1.6		6
			Customer Behavior	1.0			7
		Loss of Biodiversi	ty	Add-on Factor	0.75		8
		Other Environme	ntal Risks	Add-on Factor	0.5		9
	Other ESG Risks	Possible Human F	Rights Issues	Add-on Factor	0.5	2.3	10
		Other Social Risks		Add-on Factor	0.5		11
	ESG-Risk Score a	t Sector-Level:			8	8.31	

Acute Climate Risk

A 01.4	Agricu	ltur	e, Forestry and Fishing - Animal Prod	uct	cion				Reference
	Are ac	ute	climate events in the country/region	alı	ready relevant	Scoring	g		
			tor under consideration?						
					"No"	Score	Weight	Total	
	"No" Is it likely that this relevance will be given in the future?				"Yes"		1.00	0.00	1
					"Yes, very likely"		1.00	0.00	1
			Observed loss of assets/property				1.00	0.75	2
			Expected impact on revenue				1.00	0.50	3
			Expected impact on costs				1.00	0.50	4
	"Yes"	x	1-3 expected to increase in the futur	e		0.50	1.00	0.50	5
			Lack of adaptability of the business i	mo	del	0.50	1.00	0.50	6
			Sectors in the supply chain have a scillinate risks (see table below)	Sectors in the supply chain have a score >2.5 for acute climate risks (see table below)				0.50	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			-0.50	+/-	-0.50	8
	Acute	Clin	nate Risk Score at Sector-Level:					3.0	Max. 4

Chronic Climate Risk

A 01.4	Agricu	lture	e, Forestry and Fishing - Animal P	rod	luction				Reference
	Are ch	ıron	ic climate developments in the	cc	ountry/region	Scoring			
	already	rele	evant for the sector under conside	rati	ion?	Score	Weight	Total	
					"No"	Score	w eight	Total	
	"No" Is it likely that this relevance will be given in the future?						1.00	0.00	1
					"Yes, very likely"		1.00	0.00	1
			Observed loss of assets/property			0.75	1.00	0.75	2
			Expected impact on revenue			0.50	1.00	0.50	3
			Expected impact on costs			0.75	1.00	0.75	4
	"Yes"	x	1-3 expected to increase in the fi	utu	re	0.75	1.00	0.75	5
		Lack of adaptability of the busin			model	0.75	1.00	0.75	6
	Sectors in the supply chain have acute climate risks (see table bel				0.75	1.00	0.75	7	
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)				+/-	-0.75	8
	Chroni	c Cl	imate Risk Score at Sector-Level:					3.5	Max. 4

GHG Emissions

A 01.4	Agriculture, Forestry an	d Fishing - Animal l	Prod	uction	Scoring		Reference
	Assignment of a score				Scoring		
	sector emissions (X) of the	he total emissions of	the	country	Percentage- Range	Total	
	X ≥ 10%			x	4.00		
	10% > X ≥ 7.59	%					
	7.5% > X ≥ 5%	⁄o					
	5% > X ≥ 1%						
	1% > X ≥ 0.59	⁄o					
	0.5% > X ≥ 0.	25%					
		"No"		Add-on Factor 0			
	Do sector activities have a negative impact on carbon sinks?	"Yes"		Add-on Factor 0.5			
		"Yes, severely"	x	Add-on Factor 1		1.00	
	Are sectors in the	"No"		Add-on Factor 0			
	supply chain assessed with significant or	"Yes, score 3 emissions"		Add-on Factor 0.25			
	existential emissions?	"Yes, score 4 emissions"		Add-on Factor 0.5			
	GHG-Emission Contribu	ition Score at Sector	-Lev	rel:		4.0	Max. 4

Probability of Regulatory Change

A 01.4	Agricu	ıltur	e, Forestry and Fishing -	- A	nimal Production	Scorin	g		Reference
			ness case of the sector ur ted by regulatory change						
					"No"	Score	Weight	Total	
		"No"	Is this kind of		"Yes, it is planned"		1.00		
	"No"		regulation already present in other relevant countries?		"Yes, it is established"		1.00	0.00	1
					"Yes, it is established and a further extention is planned"		1.00		
			Announced in the country under consideration			0.75	1.00	0.75	2
			Established in the cour	ıtry	under consideration	0.00	2.00	0.00	3
			Further extension of announced	f t	his very regulation	0.00	0.50	0.00	4
	"Yes"	x	Announced in other re	lev	rant countries	0.50	0.50	0.25	5
		Established in other re		lev	ant countries	0.75	1.00	0.75	6
			Perceived pressure of t context of catastroph losses			0.00	1.00	0.00	7
	Local expert grading (score-modestween -0.5 and +0.5, see commentary below)				(score-modification ntary below)		+/-	0.00	8
	Probal	 bilit	y of regulatory Change F	Risl	Score at Sector-Level:			2.0	Max. 4

Impact of Regulatory Change

A 01.4	Agricu	ltur	e, Forestry and Fishing - An	imal Production	Scorin	g		Reference
		(in	that the regulatory change the form of opportunities,					
	sector?			"No, probability score < 1.5 or no ESG impact assumed"	Score	Weight	Total	
	"No"		Is the assessed score for "Probability of Regulatory Change" >	"Yes, score > 1.5 and an ESG impact is assumed"		1.00		
	"No"		1.5 AND is an ESG-impact observed in other relevant countries?	"Yes, score > 1.5 and an ESG impact is perceived"		1.00	0.00	1
			"Yes, score > 1.5 and a high ESG impact is perceived"		1.00			
			Effect on the business mod	el	0.75	2.00	1.50	2
			Strong effect on the busine	ess model	0.00	1.00	0.00	3
			1-2 expected to increase in	the future	0.00	0.50	0.00	4
	"Yes"	x	1 or 2 obvious in other rele	evant countries	0.50	1.00	0.50	5
		Impact on the value chain			0.00	0.50	0.00	6
		Lack of adaptability of the	business model	0.00	1.00	0.00	7	
	Local expert grading between -0.5 and +0.5, see commen			(score-modification tary below)		+/-	0.00	8
	Impact	of	regulatory Change Risk Scor				2.0	Max. 4

Technological Change

A 01.4	Agricultu Productio		Forestry and l	Fishi	ing - Animal	Scoring			Reference		
	sustainab	ility-	ative technology/ -related advanta	ges	available/used						
	in this se	ctor i	in the country und	er c	onsideration? "No"	Score	Weight	Total			
		Is this			"No, to date it is just at theory/ study- level"		1.00				
	"No"		technology available/ used in this sector in other relevant countries?		"Yes, it is available and used in other relevant countries"		1.00	0.00	1		
			countries:				"Yes, it is heavily used in other relevant countries"		1.00		
			Use in the consideration	С	ountry under	0.50	1.00	0.50	2		
			Heavy use in consideration	the	country under	0.00	1.00	0.00	3		
			Use in other rele	vant	countries	0.50	0.50	0.25	4		
			Heavy use in oth	er re	elevant countries	0.00	1.00	0.00	5		
	"Yes"	x	Accepted econ technology (lower costs and/			0.50	1.50	0.75	6		
		Accepted strong of technology (much lower conhigher yields)				0.00	1.00	0.00	7		
	Local expert modification -0.5 and +0.5, below)		Ü	between ce commentary		+/-	0.00	8			
	Technolo	ogical	l Change Risk Scor	e at	Sector-Level:			1.5	Max. 4		

Customer Behavior

A 01.4			e, Forestry and Fishing - A		Scorin	g		Reference
	(see	abo	mers accepting/demanding ove assessment of tontry under consideration?	g the new technology echnological change)	Score	Weight	Total	
				"No"	beore	Weight	Total	
	"No"		Are customers accepting/ demanding this very	"Yes, the use can be recognised in its beginnings"		1.00		
	INO		technology in other, export-relevant countries?	"Yes, the use can be clearly recognised"		1.00	0.00	1
				"Yes, the strong use can be clearly recognised"		1.00		
			Perceived benefits from the user's perspective	in costs/maintenance ve	0.00	2.00	0.00	2
			Perceived benefits from the user's perspective		0.50	1.00	0.50	3
			Perceived benefits from the user's perspectiv	in quality/durability ze	0.00	1.00	0.00	4
	"Yes"	x	Perceived benefits to soci	ety and ecosystems	0.75	0.50	0.38	5
			Mass Media presence con	veying a positive image	0.00	1.00	0.00	6
		VIP-Advocates			0.00	0.50	0.00	7
			Local expert grading between -0.5 and +0.5, see comme			+/-	0.00	8
	Custon	ner	Behavior Risk Score at Sec	tor-Level:			1.0	Max. 4

Forestry and Logging

Total

A 2	Agriculture, For	estry and Fishing	- Forestry and Logging	Scoring			Reference
	Physical	Acute		3.0			1
	Climate Risk	Chronic		3.5		3.3	2
		GHG-Emission C	ontribution	4.0			3
			Probability of regulatory Change	2.0			4
	Transition Climate Risk	Transitional Intensity	Economic Impact of regulatory Change	2.5	1.6	2.81	5
			Technological Change	1.5	1.6		6
			Customer Behavior	0.5			7
		Loss of Biodivers	ity	Add-on Factor	1.00		8
	Other ESG	Other Environme	ental Risks	Add-on Factor	0.75		9
	Risks	Possible Human	Rights Issues	Add-on Factor	0.5	2.8	10
		Other Social Risks		Add-on Factor	0.5		11
	ESG-Risk Score	at Sector-Level:			9	8.81	

Acute Climate Risk

A 2	Agricu	ltur	e, Forestry and Fishing - Forestry and	l Logging				Reference
			climate events in the country/region a	lready relevant	Scorin	g		
	for the	sect	tor under consideration?		Score	Weight	Total	
				"No"	Score	Weight	Total	
	"No"		Is it likely that this relevance will be given in the future?	"Yes"		1.00	0.00	1
				"Yes, very likely"		1.00	0.00	1
			Observed loss of assets/property		0.75	1.00	0.75	2
			Expected impact on revenue	0.50	1.00	0.50	3	
			Expected impact on costs	ted impact on costs		1.00	0.75	4
	"Yes"	x 1-3 expected to increase in the future	re	0.50	1.00	0.50	5	
			Lack of adaptability of the business	model	0.50	1.00	0.50	6
			Sectors in the supply chain have a score >2.5 for acute climate risks (see table below)			1.00	0.00	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8
	Acute Climate Risk Score at Sector-Level: 3.0							

Chronic Climate Risk

A 2	Agricu	lture	e, Forestry and Fishing - Forestry a	nd	Logging				Reference
			ic climate developments in the			Scoring	g		
	already	rel	evant for the sector under consider	atio	on?	Score	Weight	Total	
					"No"	Score	Weight	Total	
	"No"		Is it likely that this relevance will be given in the future?		"Yes"		1.00	0.00	1
					"Yes, very likely"		1.00	0.00	1
			Observed loss of assets/property				1.00	0.75	2
			Expected impact on revenue				1.00	0.75	3
			Expected impact on costs			0.50	1.00	0.50	4
	"Yes"	x	1-3 expected to increase in the future		0.75	1.00	0.75	5	
			Lack of adaptability of the busine	SS 1	model	0.50	1.00	0.50	6
			Sectors in the supply chain have a score >2.5 for acute climate risks (see table below)			0.00	1.00	0.00	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)				+/-	0.00	8
	Chronic Climate Risk Score at Sector-Level:								Max. 4

GHG Emissions

Agriculture, Forestry and	l Fishing - Forestry a	nd L	ogging	Scoring		Reference	
Assignment of a score de		_		beoring			
emissions (X) of the total	emissions of the cou	ntry		Percentage- Range Total			
X ≥ 10%	X ≥ 10%						
10% > X ≥ 7.5%							
7.5% > X ≥ 5%	7.5% > X ≥ 5%						
5% > X ≥ 1%							
1% > X ≥ 0.5%)						
0.5% > X ≥ 0.2	5%						
	"No"		Add-on Factor 0				
Do sector activities have a negative impact on carbon sinks?	"Yes"		Add-on Factor 0.5				
	"Yes, severely"	x	Add-on Factor 1		1.00		
Are sectors in the	"No"		Add-on Factor 0				
supply chain assessed with significant or existential emissions?	"Yes, score 3 emissions"		Add-on Factor 0.25				
existential emissions?	"Yes, score 4 emissions"		Add-on Factor 0.5				
GHG-Emission Contribu	tion Score at Sector-l	Leve	l:		4.0	Max. 4	

Probability of Regulatory Change

A 2	Agricu	ıltuı	re, Forestry and Fishing - Fo	prestry and Logging	Scorin	g		Reference		
			iness case of the sector unted by regulatory change (1							
				"No"	Score	Weight	Total			
	"NT. "		Is this kind of regulation already	"Yes, it is planned"		1.00				
	"No"		present in other relevant countries?	"Yes, it is established"		1.00		1		
				"Yes, it is established and a further extention is planned"		1.00				
			Announced in the country	0.75	1.00	0.75	2			
			Established in the country under consideration			2.00	0.00	3		
			Further extension of announced	this very regulation	0.00	0.50	0.00	4		
	"Yes"	x	Announced in other relev	vant countries	0.50	0.50	0.25	5		
			Established in other relev	ant countries	0.75	1.00	0.75	6		
			Perceived pressure of the context of catastrophes or	ne population i.e. in the severe economic losses		1.00	0.00	7		
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8		
	Probability of regulatory Change Risk Score at Sector-Level: 2.0									

Impact of Regulatory Change

A 2	Agricu	ltur	re, Forestry and Fishing - Fores	stry	and Logging	Scoring	g		Reference
			y that the regulatory change the form of opportunities,						
	sector?	,			"No, probability	Score	Weight	Total	
					score < 1.5 or no ESG impact assumed"	Seore	Weight.	10001	
	"NIo"		Is the assessed score for "Probability of Regulatory Change" > 1.5 AND is an		"Yes, score > 1.5 and an ESG impact is assumed"		1.00		
	"No"		ESG-impact observed in other relevant countries?		"Yes, score > 1.5 and an ESG impact is perceived"		1.00	0.00	1
					"Yes, score > 1.5 and a high ESG impact is perceived"		1.00		
			Effect on the business model Strong effect on the business model			0.75	2.00	1.50	2
						0.00	1.00	0.00	3
			1-2 expected to increase in the	ne i	future		0.50	0.00	4
	"Yes"	x	1 or 2 obvious in other releva	ant	countries	0.50	1.00	0.50	5
			Impact on the value chain			0.50	0.50	0.25	6
			Lack of adaptability of the bu	ısiı	ness model	0.00	1.00	0.00	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)				+/-	0.00	8
	Impact	of	regulatory Change Risk Score	at S	Sector-Level:			2.5	Max. 4

Technological Change

A 2	Agricu	ltur	e, Forestry and Fishing - Fore	str	y and Logging	Scorin	g		Reference
	sustain		alternative technology/ lity-related advantages	3	available/used				
	in this	sect	tor in the country under consi	de		Score	Weight	Total	
					"No" "No, to date it is				
			Is this technology		just at theory/ study-level"		1.00		
	"No"		available/ used in this sector in other relevant countries?		"Yes, it is available and used in other relevant countries"		1.00	0.00	1
					"Yes, it is heavily used in other relevant countries"		1.00		
			Use in the country under consideration Heavy use in the country under consideration				1.00	0.50	2
							1.00	0.00	3
			Use in other relevant countries		0.25	0.50	0.13	4	
	"Yes"	x	Heavy use in other relevant	coı	ıntries	0.00	1.00	0.00	5
			Accepted economic ben (lower costs and/or higher y		07	0.50	1.50	0.75	6
			Accepted strong economic (much lower costs and/or mu		_,	0.00	1.00	0.00	7
		<u>-</u>	Local expert grading (score-modification between -0.5 and +0.5, see commentary below)				+/-	0.00	8
	Techno	olog	gical Change Risk Score at Sect			1.5	Max. 4		

Customer Behavior

A 2	Agricu	ltuı	re, Forestry and Fishing - Fo	ores	try and Logging	Scorin	σ.		Reference
	Are c		omers accepting/demanding	_	he new technology	Beorin	5		
			ntry under consideration?			Score	Weight	Total	
					"No")		
	"No"		Are customers accepting/ demanding this very		"Yes, the use can be recognised in its beginnings"		1.00		
	110		technology in other, export-relevant countries?		1.00	0.00	1		
					"Yes, the strong use can be clearly recognised"		1.00		
			Perceived benefits from the user's perspective	costs/maintenance	0.00	2.00	0.00	2	
			Perceived benefits from the user's perspective		in health	0.00	1.00	0.00	3
			Perceived benefits from the user's perspective	in e	quality/durability	0.00	1.00	0.00	4
	"Yes"	x	Perceived benefits to socie	ety	and ecosystems	0.75	0.50	0.38	5
		Mass Media presence con		vey	ing a positive image	0.00	1.00	0.00	6
			VIP-Advocates			0.00	0.50	0.00	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)				+/-	0.00	8
	Custor	ner	Behavior Risk Score at Sect	or-	Level:			0.5	Max. 4

Fishing and Aquaculture

Total

A 3	Agriculture, Fore	stry and Fishing - l	Fishing and Aquaculture	Scoring			Reference
	Physical Climate	Acute		2.5		2.0	1
	Risk	Chronic		3.0		2.8	2
		GHG-Emission Co	ontribution	4.0			3
	Transition Climate Risk		Probability of regulatory Change	1.0		2.31	4
		Transitional Intensity	Economic Impact of regulatory Change	0.0	0.6		5
			Technological Change	1.0	0.6		6
			Customer Behavior	0.5			7
		Loss of Biodiversit	Add-on Factor	0.75		8	
		Other Environme	ntal Risks	Add-on Factor	0.5		9
	Other ESG Risks	Possible Human R	tights Issues	Add-on Factor	0.5	2.3	10
		Other Social Risks	Add-on Factor	0.5		11	
	ESG-Risk Score at	t Sector-Level:				7	7.31

Acute Climate Risk

A 3	Agricu	ltur	e, Forestry and Fishing - Fishing and	Αç	quaculture				Reference
			climate events in the country/region	alr	eady relevant	Scorin	g		
	for the	sect	tor under consideration?			Score	Weight	Total	
					"No"				
	"No"		Is it likely that this relevance will be given in the future?		"Yes"		1.00	0.00	1
					"Yes, very likely"		1.00	0.00	1
			Observed loss of assets/property		0.50	1.00	0.50	2	
			Expected impact on revenue				1.00	0.50	3
			Expected impact on costs		0.50	1.00	0.50	4	
	"Yes"	x	x	x 1-3 expected to increase in the future		0.50	1.00	0.50	5
			Lack of adaptability of the business	mo	odel	0.50	1.00	0.50	6
			Sectors in the supply chain have a score >2.5 for acute climate risks (see table below)				1.00	0.00	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)				+/-	0.00	8
	Acute	Clin		2.5	Max. 4				

Chronic Climate Risk

A 3	Agricu	lture	e, Forestry and Fishing - Fishing and	ł A	quaculture				Reference
	Are cl	nron	ic climate developments in the	CO	ountry/region	Scorin	g		
	already	relo	evant for the sector under considera	itio	n?	Score	Weight	Total	
					"No"	Score	weight	Total	
	"No"		Is it likely that this relevance will be given in the future?		"Yes"		1.00	0.00	1
					"Yes, very likely"		1.00	0.00	1
			Observed loss of assets/property			0.75	1.00	0.75	2
			Expected impact on revenue			0.75	1.00	0.75	3
			Expected impact on costs			0.50	1.00	0.50	4
	"Yes"	x	1-3 expected to increase in the fut			0.50	1.00	0.50	5
			Lack of adaptability of the busines	s n	nodel	0.50	1.00	0.50	6
			Sectors in the supply chain have a score >2.5 for acute climate risks (see table below)				1.00	0.00	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)				+/-	0.00	8
	Chroni	c Cl		3.0	Max. 4				

GHG Emissions

Agriculture, Forestry and	Fishing - Fishing and	d Aq	uaculture	Scoring		Reference	
Assignment of a score de			ge of the sector				
emissions (X) of the total	emissions of the cour	ntry		Percentage- Range	Total		
X ≥ 10%	X ≥ 10%						
10% > X ≥ 7.5%							
7.5% > X ≥ 5%							
5% > X ≥ 1%							
1% > X ≥ 0.5%							
0.5% > X ≥ 0.2	5%						
	"No"		Add-on Factor 0				
Do sector activities have a negative impact on carbon sinks?	"Yes"		Add-on Factor 0.5				
	"Yes, severely"	x	Add-on Factor 1		1.00		
Are sectors in the	"No"		Add-on Factor 0				
supply chain assessed with significant or	"Yes, score 3 emissions"		Add-on Factor 0.25				
existential emissions?	"Yes, score 4 emissions"		Add-on Factor 0.5				
GHG-Emission Contribut	tion Score at Sector-L	:		4.0	Max. 4		

Probability of Regulatory Change

A 3	Agricu	ıltur	e, Forestry and Fishing - I	Fish	ning and Aquaculture	C	_		Reference
			iness case of the sector u			Scorin	g		
	to be a	ffec	ted by regulatory change ((no	w/ near future)?	Score	Weight	Total	
					"No"				
	"No"		Is this kind of regulation already		"Yes, it is planned"		1.00		
	110		present in other relevant countries?		"Yes, it is established"		1.00	0.00	1
					"Yes, it is established and a further extention is planned"		1.00		
			Announced in the count	try	under consideration	0.50	1.00	0.50	2
			Established in the country under consideration			2.00	0.00	3	
			Further extension of announced	f t	his very regulation	0.00	0.50	0.00	4
	"Yes"	x	Announced in other rele	evai	nt countries	0.50	0.50	0.25	5
			Established in other rele	evar	nt countries	0.00	1.00	0.00	6
			Perceived pressure of the context of catastrophes of		* *	0.00	1.00	0.00	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)				+/-	0.00	8
	Probal	oilit		1.0	Max. 4				

Impact of Regulatory Change

A 3	Agricu	ıltur	e, Forestry and Fishing - Fishing	g and	d Aquaculture	Scoring	g		Reference
			y that the regulatory change wi m of opportunities, risks, costs) (
				x	"No, probability score < 1.5 or no ESG impact assumed"	Score	Weight	Total	Total 0.00 1 0.00 2 0.00 3 0.00 4 0.00 5 0.00 6 0.00 7
	"NT "		Is the assessed score for "Probability of Regulatory		"Yes, score > 1.5 and an ESG impact is assumed"		1.00		
	"No"	х	Change" > 1.5 AND is an ESG-impact observed in other relevant countries?		"Yes, score > 1.5 and an ESG impact is perceived"		1.00	0.00	1
					"Yes, score > 1.5 and a high ESG impact is perceived"		1.00		
Effect on the business model				0.00	2.00	0.00	2		
			Strong effect on the business n	node	d	0.00	1.00	0.00	3
			1-2 expected to increase in the	futi	ıre	0.00	0.50	0.00	4
	"Yes"		1 or 2 obvious in other relevan	ıt co	untries	0.00	1.00	0.00	5
			Impact on the value chain			0.00	0.50	0.00	6
		Lack of adaptability of the business model				0.00	1.00	0.00	7
		Local expert grading (score-modification between -0.5 and +0.5, see commentary below)				+/-	0.00	8	
	Impac	t of	regulatory Change Risk Score at	Sec	tor-Level:			0.0	Max. 4

Technological Change

A 3	Agricu	ltur	e, Forestry and Fishing - Fish	ing	and Aquaculture	Scorin	σ		Reference
		ın .abil	alternative technology/ ity-related advantages		~,	5001111	.		
			or in the country under cons			Score	Weight	Total	Cotal 20.00 1 0.00 1 0.50 2 0.00 3 0.25 4 0.00 5 0.00 6 0.00 7
					"No"				
			Is this technology		"No, to date it is just at theory/ study-level"		1.00		100 1 300 2 300 3 25 4 300 5
	"No"		available/ used in this sector in other relevant countries?		"Yes, it is available and used in other relevant countries"		1.00	0.00	1
					"Yes, it is heavily used in other relevant countries"		1.00		
			Use in the country under co	nsi	deration	0.50	1.00	0.50	2
			Heavy use in the country ur	ıde	r consideration	0.00	1.00	0.00	3
			Use in other relevant countr	ries		0.50	0.50	0.25	4
	"Yes"	x	Heavy use in other relevant	CO	untries	0.00	1.00	0.00	5
			Accepted economic ben (lower costs and/or higher y		0,	0.00	1.50	0.00	6
			Accepted strong economic (much lower costs and/or m			0.00	1.00	0.00	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8	
	Techno	olog	ical Change Risk Score at Sec	tor	-Level:			1.0	Max. 4

Customer Behavior

A Agricu	ıltur	e, Forestry and Fishing - Fis	hing and Aquaculture	Scorin	g		Reference
(see	ab	omers accepting/demanding ove assessment of ntry under consideration?	g the new technology technological change)				
	Cou	intry under consideration:	"No"	Score	Weight	Total	
"No"		Are customers accepting/ demanding this very	"Yes, the use can be recognised in its beginnings"		1.00		
INO		technology in other, export-relevant countries?	"Yes, the use can be clearly recognised"		1.00	0.00	1
			"Yes, the strong use can be clearly recognised"		1.00		
			in costs/maintenance	0.00	2.00	0.00	2
from the user's perspective Perceived benefits in from the user's perspective		0.00	1.00	0.00	3		
		Perceived benefits from the user's perspective	in quality/durability	0.00	1.00	0.00	4
"Yes"	x	Perceived benefits to societ	ry and ecosystems	0.75	0.50	0.38	5
		Mass Media presence conv	eying a positive image	0.00	1.00	0.00	2 3 4
		VIP-Advocates		0.00	0.50	0.00	7
		Local expert grading (sco -0.5 and +0.5, see comment			+/-	0.00	8
Custor	Customer Behavior Risk Score at Sector-Level:						

B. Mining and Quarrying

Total

В	Mining and Quar	rying		Scoring			Reference
	Physical	Acute		3.0			1
	Climate Risk	Chronic		2.5		2.8	2
		GHG-Emission Co	ontribution	3.5			3
			Probability of regulatory Change	2.5		3.3	4
	Transition Climate Risk Other ESG Risks	Acute Acute 3.0 Chronic 2.5 GHG-Emission Contribution 3.5 Probability of regulatory Change Economic Impact of regulatory Change Transitional Intensity Technological Change 0.5 Customer Behavior Other Environmental Risks Add-on Factor Add-on Factor 0.75		2.31	5		
		Intensity	Technological Change	0.5	1.1		6
			Customer Behavior	0.0			7
		Loss of Biodiversi	ty		1.00	2 3 4 2.31 5 6 7 8 9	
	Other FSG Ricks	Other Environme	ntal Risks		0.75		9
	Loss of Biodiversity Add-on Factor Other Environmental Risks Possible Human Rights Issues Add-on Factor Add-on Factor 0.75				0.75	3.3	10
		Other Social Risks	s		0.75		11
	ESG-Risk Score a	t Sector-Level:				8	8.31

Acute Climate Risk

В	Mining	g and	d Quarrying					Reference
	Are act	ute o	climate events in the country/region al	ready relevant	Scorin	g		
			tor under consideration?		C.	****	m . 1	
				"No"	Score	Weight	0.00 1 0.75 2	
	"No"		Is it likely that this relevance will be given in the future?	"Yes"		1.00	0.00	1
				"Yes, very likely"		1.00	0.00	1
	Observed loss of assets/property 0.75 1.00 0.75 2	2						
			Expected impact on revenue		0.50	1.00	0.50	3
			Expected impact on costs		0.50	1.00	0.50	4
	"Yes"	x	1-3 expected to increase in the futur	e	0.50	1.00	0.50	5
			Lack of adaptability of the business r	nodel	0.50	1.00	0.50	6
			Sectors in the supply chain have a acute climate risks (see table below)	score >2.5 for	0.25	1.00	0.25	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8
	Acute	 Clin	nate Risk Score at Sector-Level:				3.0	Max. 4

Chronic Climate Risk

В	Mining	and	l Quarrying						Reference
	Are ch	iron	ic climate developments in the	cc	ountry/region	Scorin	g		
	already	rele	evant for the sector under consider	ati	on?	Score	Weight	Total	
					"No"		· · · · · · · · · · · · · · · · · · ·	1000	al
	"No"		Is it likely that this relevance will be given in the future?		"Yes"		1.00	0.00	
				"Yes, very likely"		1.00	0.00	1	
		Observed loss of assets/property 0.25 1.00	0.25	2					
			Expected impact on revenue			0.50	1.00	0.50	3
			Expected impact on costs			0.50	1.00	0.50	4
	"Yes"	x	1-3 expected to increase in the fu	tuı	re	0.50	1.00	0.50	5
			Lack of adaptability of the busine	SS :	model	0.50	1.00	0.50	6
			Sectors in the supply chain have acute climate risks (see table belo			0.25	1.00	0.25	7
		Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8		
	Chroni	c Cl	imate Risk Score at Sector-Level:					2.5	Max. 4

GHG Emissions

B Mining and Quarrying				Scoring		Reference
Assignment of a score de	pending on the perce	ntag	ge of the sector			
emissions (X) of the total e	missions of the count	ry		Percentage- Range	Total	
X ≥ 10%						
10% > X ≥ 7.5%						
7.5% > X ≥ 5%						
5% > X ≥ 1%			x	2.50		
1% > X ≥ 0.5%						
0.5% > X ≥ 0.25	%					
	"No"		Add-on Factor 0			
Do sector activities have a negative impact on carbon sinks?	"Yes"	x	Add-on Factor 0.5		0.50	
	"Yes, severely"		Add-on Factor 1			
			•			
Are sectors in the supply	"No"	Add-on Factor 0				
chain assessed with significant or existential	"Yes, score 3 emissions"		Add-on Factor 0.25			
emissions?	"Yes, score 4 emissions"	x	Add-on Factor 0.5		0.50	
GHG-Emission Contribution	on Score at Sector-Lev	/el:			3.5	Max. 4

Probability of Regulatory Change

В	Minin	g an	d Quarrying		Scorin	g		Reference	
				under consideration likely		.			
	to be a	ffec	ted by regulatory change (now/ near future)?	Score	Weight	Total		
				"No"					
	IINT. II		Is this kind of regulation already	"Yes, it is planned"		1.00			
	"No"		present in other relevant countries?	"Yes, it is established"		1.00	0.00	1	
				"Yes, it is established and a further extention is planned"		1.00			
			Announced in the count	ry under consideration	0.75	1.00	0.75	2	
			Established in the countr	ry under consideration	0.50	2.00	1.00	3	
			Further extension of announced	this very regulation		0.50	0.00	4	
	"Yes"	x	Announced in other rele	vant countries		0.50	0.00	5	
			Established in other rele	vant countries	0.75	1.00	0.75	6	
			Perceived pressure of t	he population i.e. in the		1.00	0.00	7	
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8	
	Probal	Probability of regulatory Change Risk Score at Sector-Level: 2.5							

Impact of Regulatory Change

В	Minin	g an	d Quarrying		Scorin	g		Reference
			that the regulatory change will				1	
	the for	m c	of opportunities, risks, costs) on					
				"No, probability score < 1.5 or no ESG impact assumed"	Score	ring Veight Total		
	"No"		Is probability of regulatory change > 1.5 AND an ESG-	"Yes, score > 1.5 and an ESG impact is assumed"		1.00		
	110		impact is observed in other relevant countries?	"Yes, score > 1.5 and an ESG impact is perceived"		1.00	0.00	1
				"Yes, score > 1.5 and a high ESG impact is perceived"		1.00		
			Effect on the business model		0.75	2.00	1.50	2
			Strong effect on the business r	nodel		1.00	0.00	3
			1-2 expected to increase in the	e future		0.50	0.00	4
	"Yes"	x	1 or 2 obvious in other relevan	nt countries		1.00	0.00	5
			Impact on the value chain			0.50	0.00	6
			Lack of adaptability of the bus	iness model		1.00	0.00	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8
	Impac	t of	regulatory Change Risk Score a	t Sector-Level:			1.5	Max. 4

Technological Change

В	Minin	g an	d Quarrying			Scoring	g		Reference
	sustair		alternative technology/ lity-related advantages tor in the country under consi	S	available/used				1 2 3
					"No"	Score	ore Weight Total 1.00 1.00 0.00 1.00 1.00 2 1.00 0.00 3		
			Is this technology		"No, to date it is just at theory/ study-level"		1.00		
	"No"		available/ used in this sector in other relevant countries?		"Yes, it is available and used in other relevant countries"		1.00	0.00	1
					"Yes, it is heavily used in other relevant countries"		1.00		
			Use in the country under co	nsic	leration		1.00	0.00	2
			Heavy use in the country un	der	consideration		1.00	0.00	3
			Use in other relevant countr	ies		0.50	0.50	0.25	4
	"Yes"	x	Heavy use in other relevant	cou	intries		1.00	0.00	5
			Accepted economic ben (lower costs and/or higher yi				1.50	0.00	6
			Accepted strong economic benefit of technology (much lower costs and/or much higher yields)				1.00	0.00	7
		Local expert grading (score-m -0.5 and +0.5, see commentary	-mc	odification between		+/-	0.00	8	
	Techn	olog	gical Change Risk Score at Sect	tor-	Level:			0.5	Max. 4

C. Manufacturing

Manufacturing of Tobacco Products

Total

C 12	Manufacture of	Tobacco Products	3	Scoring			Reference
	Physical	Acute	2.0				
	Climate Risk	Chronic		2.5		2.3	2
		GHG-Emission C	Contribution	3.0			3
			•	2.5			4
	Physical Climate Risk Transition Climate Risk Other ESG Risks	Transitional	_	2.5	2.5	2.75	5
		Intensity	Technological Change	6			
			Customer Behavior	3.0			7
		Loss of Biodivers	ity		1.00		8
	Other ESG	Other Environm	ental Risks		0.5		9
		Possible Human	Rights Issues	Add-on Factor	0.75	3.3	10
		Other Social Risk	KS	Add-on Factor			11
	ESG-Risk Score	at Sector-Level:				8	8.25

Acute Climate Risk

C 12	Manufa	actu	re of Tobacco Products						Reference
	Are ac	ute	climate events in the country.	/re	gion already	Scorin	g		
			r the sector under consideration			C	W-:-L	T-4-1	
					"No"	Score	Weight	Total	
	"No"		Is it likely that this relevance will be given in the future?		"Yes"		1.00	0.00	1
				"Yes, very likely"		1.00	0.00	1	
			Observed loss of assets/propert	y		0.50	1.00	0.50	2
			Expected impact on revenue			0.50	1.00	0.50	3
			Expected impact on costs			0.00	1.00	0.00	4
	"Yes"	x 1-3 expected to increase in the future				0.00	1.00	0.00	5
			Lack of adaptability of the busi	Lack of adaptability of the business model			1.00	0.50	6
			Sectors in the supply chain ha for acute climate risks (see table			0.50	1.00	0.50	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)				+/-	0.00	8
	Acute (Climate Risk Score at Sector-Level:						2.0	Max. 4

Chronic Climate Risk

C 12	Manufa	ıctu	re of Tobacco Products					Reference
	Are ch	ron	ic climate developments in the c	ountry/region	Scorin	g		
			evant for the sector under considera					
				"No"	Score	Weight	Total	
	"No"		Is it likely that this relevance will be given in the future?	"Yes"		1.00	0.00	1
				"Yes, very likely"		1.00	0.00	1
	"Yes" x		Observed loss of assets/property		0.50	1.00	0.50	2
			Expected impact on revenue		0.50	1.00	0.50	3
			Expected impact on costs		0.00	1.00	0.00	4
		x	1-3 expected to increase in the fut	ıre	0.00	1.00	0.00	5
			Lack of adaptability of the business	s model	0.50	1.00	0.50	6
		_	Sectors in the supply chain have a chronic climate risks (see table bel		0.75	1.00	0.75	7
			Local expert grading (score between -0.5 and +0.5, see commentary below.	-modification ow)		+/-	0.00	8
	Chroni	Chronic Climate Risk Score at Sector-Level:						

GHG Emissions

C 12	Manufacture of Tobacc	o Products			Scoring		Reference
	Assignment of a score sector emissions (X) of				Percentage-		
					Range	Total	
	X ≥ 10%						
	10% > X ≥ 7.5	5%					
	7.5 % > X ≥ 5	5%					
	5% > X ≥ 1%						
	1% > X ≥ 0.5	5%					
	0.5% > X ≥ 0).25%			x	1.50	
	Do sector activities	"No"		Add-on Factor 0			
	have a negative impact on carbon	"Yes"		Add-on Factor 0.5			
	sinks?	"Yes, severely"	x	Add-on Factor 1		1.00	
	Are sectors in the			Add-on Factor 0			
	supply chain assessed with significant or	"Yes, score 3 emissions"		Add-on Factor 0.25			
	existential emissions?	"Yes, score 4 emissions"	x	Add-on Factor 0.5		0.50	
	GHG-Emission Contrib	oution Score at Sect	or-L	evel:		3.0	Max. 4

Probability of Regulatory Change

C 12	Manuf	actu	are of Tobacco Products			Scorin	g		Reference
			iness case of the sector u						
					"No"	Score	Weight	Total	1 2 3 4
			Is this kind of		"Yes, it is planned"		1.00		
	"No"		regulation already present in other relevant countries?		"Yes, it is established"		1.00	0.00	1
					"Yes, it is established and a further extention is planned"		1.00		
			Announced in the countr	y u	ınder consideration	0.00	1.00	0.00	2
			Established in the country	y u	nder consideration	0.75	2.00	1.50	3
			Further extension of this	ver	y regulation announced	0.00	0.50	0.00	4
	"Yes"	'Yes" x	Announced in other relev	van	t countries	0.50	0.50	0.25	5
			Established in other relev	/an	t countries	0.75	1.00	0.75	6
			Perceived pressure of the context of catastrophes or			0.00	1.00	0.00	7
		Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8		
	Probal	oilit _y	y of regulatory Change Risl	k S	core at Sector-Level:			2.5	Max. 4

Impact of Regulatory Changes

C 12	Manuf	actu	are of Tobacco Products		Scorin	g		Reference
			that the regulatory change will m of opportunities, risks, costs)			Weight Total 1.00 1.00 2.00 1.50 1.00 0.50 0.75 0.50 0.00		
	(iii tiic	101	in or opportunities, risks, costs)	"No, probability score < 1.5 or no ESG impact assumed"	Score	Weight	Total	
	"NIa"		Is the assessed score for "Probability of Regulatory Change" > 1.5 AND is an	"Yes, score > 1.5 and an ESG impact is assumed"		1.00		
	"No"		ESG-impact observed in other relevant countries?	"Yes, score > 1.5 and an ESG impact is perceived"		1.00	0.00	1
				"Yes, score > 1.5 and a high ESG impact is perceived"		1.00		
			Effect on the business model		0.75	2.00	1.50	2
			Strong effect on the business	model	0.00	1.00	0.00	3
			1-2 expected to increase in th	e future	0.00	0.50	0.00	4
	"Yes"	x	1 or 2 obvious in other releva	nt countries	0.75	1.00	0.75	5
			Impact on the value chain		0.00	0.50	0.00	6
			Lack of adaptability of the bu	siness model	0.00	1.00	0.00	7
			Local expert grading (score-new -0.5 and +0.5, see commentary			+/-	0.00	8
	Impact	t of	regulatory Change Risk Score a	t Sector-Level:			2.5	Max. 4

Technological Change

C 12	Manuf	actı	are of Tobacco Products		Scoring	σ		Reference
		an iabil	alternative technology/ lity-related advantages	methodology with a vailable/used		ь		
			tor in the country under consi		Score	Weight	Total	
				"No"			0.00 0.50 0.00 0.25 0.00 1.13	
			Is this technology	"No, to date it is just at theory/ study-level"		1.00		
	"No"		available/ used in this sector in other relevant countries?	"Yes, it is available and used in other relevant countries"		1.00	0.00	1
				"Yes, it is heavily used in other relevant countries"		1.00		
			Use in the country under co	nsideration	0.50	1.00	0.50	2
			Heavy use in the country un	der consideration	0.00	1.00	0.00	3
			Use in other relevant countr	ies	0.50	0.50	0.25	4
	"Yes"	x	Heavy use in other relevant	countries	0.00	1.00	0.00	5
			Accepted economic ben (lower costs and/or higher y	nefit of technology ields)	0.75	1.50	1.13	6
			Accepted strong economic (much lower costs and/or m	0,	0.00	1.00	0.00	7
			Local expert grading (score-0.5 and +0.5, see commenta			+/-	0.00	8
	Techn	olog	gical Change Risk Score at Sec			2.0	Max. 4	

Customer Behavior

C 12	Manuf	factı	ure of Tobacco Products		Scoring	σ		Reference
	Are ci	usto abc	mers accepting/demandingove assessment of to	g the new technology echnological change)	Beoring	5		
	`		ntry under consideration?		Score	Weight	Total	
				"No"				
	"No"		Are customers accepting/ demanding this very	"Yes, the use can be recognised in its beginnings"		1.00		
	140	technology in other, export-relevant countries? "Yes, the use can be clearly recognised"			1.00	0.00	1	
				"Yes, the strong use can be clearly recognised"		1.00		
			Perceived benefits if from the user's perspective	in costs/maintenance we	0.75	2.00	1.50	2
			Perceived benefits from the user's perspective		0.75	1.00	0.75	3
			Perceived benefits from the user's perspective	in quality/durability ve	0.00	1.00	0.00	4
	"Yes"	x	Perceived benefits to soci	iety and ecosystems	0.75	0.50	0.38	5
			Mass Media presence con	veying a positive image	0.25	1.00	0.25	6
			VIP-Advocates		0.00	0.50	0.00	7
		Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8	
	Custor	ner	Behavior Risk Score at Sec	tor-Level:			3.0	Max. 4

Manufacture of Coke and Refined Petroleum Products

Total

C 19	Manufacture of C	Coke and refined P	etroleum Products	Scoring			Reference
	Physical	Acute		2.5			1
	Climate Risk	Chronic		2.5		2.5	2
		GHG-Emission C	ontribution	3.5			3
			Probability of regulatory Change	3.0			4
	Transition Climate Risk	Transitional	Economic Impact of regulatory Change	2.5		3.06	5
		Intensity	Technological Change	2.0	2.6		6
			Customer Behavior	3.0		7	
		Loss of Biodiversi	ty	Add-on Factor	0.5		8
		Other Environme	ental Risks	Add-on Factor	0.75		9
	Other ESG Risks	Possible Human I	Rights Issues	Add-on Factor	0.5	2.3	10
		Other Social Risk	S	Add-on Factor	0.5		11
	ESG-Risk Score a	t Sector-Level:				8	7.81

Acute Climate Risk

C 19	Manufa	actu	re of Coke and refined Petroleum Pr	od	ucts				Reference	
			climate events in the country/region	alr	eady relevant	Scoring	g			
	for the	sect	tor under consideration?			Score	Weight	Total		
					"No"	besite	Weight	Total		
	"No"		Is it likely that this relevance will be given in the future?		"Yes"		1.00	0.00	1	
					"Yes, very likely"		1.00	0.00	1	
			Observed loss of assets/property			0.50	1.00	0.50	2	
			Expected impact on revenue			0.50	1.00	0.50	3	
			Expected impact on costs			0.50	1.00	0.50	4	
	"Yes"	x	1-3 expected to increase in the futu	ıre		0.50	1.00	0.50	5	
				Lack of adaptability of the business	m	odel	0.50	1.00	0.50	6
				Sectors in the supply chain have a score >2.5 for acute climate risks (see table below)		score >2.5 for		1.00	0.00	7
			Local expert grading (score-modif -0.5 and +0.5, see commentary belo				+/-	0.00	8	
	Acute	Clim	nate Risk Score at Sector-Level:					2.5	Max. 4	

Chronic Climate Risk

C 19	Manufa	actu	re of Coke and refined Petroleum	Pro	oducts				Reference
	Are ch	ıron	ic climate developments in the	co	ountry/region	Scorin	g		
	already	rele	evant for the sector under consider	rati	on?	Score	Weight	Total	
					"No"	Score	Weight	Total	
			Is it likely that this relevance will be given in the future?		"Yes"		1.00	0.00	1
					"Yes, very likely"		1.00	0.00	1
			Observed loss of assets/property			0.50	1.00	0.50	2
			Expected impact on revenue			0.50	1.00	0.50	3
			Expected impact on costs			0.50	1.00	0.50	4
	"Yes"	x	1-3 expected to increase in the future		0.50	1.00	0.50	5	
			Lack of adaptability of the busine	ess	model	0.50	1.00	0.50	6
		<u>-</u>	Sectors in the supply chain have a score >2.5 for acute climate risks (see table below)				1.00	0.00	7
		Local expert grading (score between -0.5 and +0.5, see commentary below			-modification w)		+/-	0.00	8
	Chronic Climate Risk Score at Sector-Level:								Max. 4

GHG Emissions

Manufacture of Coke and	refined Petroleum Pr	odu	cts	Scoring		Reference
Assignment of a score de			ge of the sector	beoring		
emissions (X) of the total	emissions of the coun	try		Percentage- Range	Total	
X ≥ 10%						
10% > X ≥ 7.5%						
7.5% > X ≥ 5%						
5% > X ≥ 1%						
1% > X ≥ 0.5%				x	2.00	
0.5% > X ≥ 0.25	5%					
	"No"		Add-on Factor 0			
Do sector activities have a negative impact on carbon sinks?	"Yes"		Add-on Factor 0.5			
	"Yes, severely"	x	Add-on Factor 1		1.00	
Are sectors in the supply	"No"		Add-on Factor 0			
chain assessed with significant or existential	"Yes, score 3 emissions"	x	Add-on Factor 0.25		0.25	
emissions?	"Yes, score 4 emissions"		Add-on Factor 0.5			
GHG-Emission Contribut	ion Score at Sector-Le	vel:			3.5	Max. 4

Probability of Regulatory Change

C 19	Manuf	actu	are of Coke and refined Pet	roleum Products	Scoring Score Weight Total 1.00 0.00 1.00 0.00 0.75 1.00 0.75 0.50 2.00 1.00			Reference	
			iness case of the sector u			.			
	to be a	пес	ted by regulatory change (r	iow/ near ruture)!	Score	Weight	Total		
				"No"			.00		
	"No"		Is this kind of regulation already	"Yes, it is planned"		1.00			
	140	relevant countries? "Yes, it is established"			1.00	0.00	1		
				"Yes, it is established and a further extention is planned"		1.00	.00		
			Announced in the country	y under consideration	0.75	1.00	0.75	2	
			Established in the country	under consideration	0.50	2.00	1.00	3	
			Further extension of announced	this very regulation	0.00	0.50	0.00	4	
	"Yes"	x	Announced in other relev	ant countries	0.50	0.50	0.25	5	
			Established in other releva	ant countries	0.75	1.00	0.75	6	
		-	Perceived pressure of th context of catastrophes or	1 1	0.00	1.00	0.00	7	
			Local expert grading (sco -0.5 and +0.5, see commer			+/-	0.00	8	
	Probab	Probability of regulatory Change Risk Score at Sector-Level:							

Impact of Regulatory Change

C 19	Manuf	actı	are of Coke and refined Petroleun	n Products	Scorin	g		Reference
			y that the regulatory change will m of opportunities, risks, costs) or					
	(iii tiic	101	in or opportunities, risks, costs) or	"No, probability score < 1.5 or no ESG impact	Score	Total 1.00		
			Is the assessed score for "Probability of Regulatory	assumed" "Yes, score > 1.5 and an ESG impact is assumed"		1.00		
	"No"		Change" > 1.5 AND is an ESG- impact observed in other relevant countries?	"Yes, score > 1.5 and an ESG impact is perceived"		1.00	0.00	1
				"Yes, score > 1.5 and a high ESG impact is perceived"		1.00		
			Effect on the business model		0.75	2.00	1.50	2
			Strong effect on the business mo	odel	0.00	1.00	0.00	3
			1-2 expected to increase in the f	uture	0.00	0.50	0.00	4
	"Yes"	x	1 or 2 obvious in other relevant	countries	0.75	1.00	0.75	5
			Impact on the value chain		0.75	0.50	0.38	6
			Lack of adaptability of the busin	ess model	0.00	1.00	0.00	7
			Local expert grading (score-n -0.5 and +0.5, see commentary b			+/-	0.00	8
	Impact	of	regulatory Change Risk Score at S	Sector-Level:			2.5	Max. 4

Technological Change

C 19			are of Coke and refined Petro		Scorin	g		Reference
	sustain		·	87			m . 1	
				"No"	Score	Weight	Total	
			Is this technology -	"No, to date it is just at theory/ study-level"		1.00		
	"No"		available/ used in this sector in other relevant countries?	"Yes, it is available and used in other relevant countries"		1.00	0.00	1
				"Yes, it is heavily used in other relevant countries"		1.00		
			Use in the country under co	onsideration	0.50	1.00	0.50	2
			Heavy use in the country u	nder consideration	0.00	1.00	0.00	3
			Use in other relevant count:	ries	0.75	0.50	0.38	4
	"Yes"	x	Heavy use in other relevant	countries	0.00	1.00	0.00	5
			Accepted economic benefit (lower costs and/or higher y	0,	0.75	1.50	1.13	6
			Accepted strong economic l (much lower costs and/or m	٠,	0.00	1.00	0.00	7
			Local expert grading between -0.5 and +0.5, see commenta	(score-modification ary below)		+/-	0.00	8
	Techn	olog	gical Change Risk Score at Sec	ctor-Level:			2.0	Max. 4

Customer Behavior

C 19	Manuf	factı	are of Coke and refined Petrol	eum Products	Saaria.	_		Reference
	Are o		omers accepting/demanding ove assessment of te	the new technology echnological change)	Scorin	8		
			ntry under consideration?	3	Score	Weight	Total	
				"No"				
	"No"		Are customers accepting/ demanding this very technology in other,	"Yes, the use can be recognised in its beginnings"		1.00		
	110		export-relevant countries?	"Yes, the use can be clearly recognised"	1.00	0.00	1	
				"Yes, the strong use can be clearly recognised"		1.00		
			Perceived benefits in from the user's perspective	n costs/maintenance	0.75	2.00	1.50	2
			Perceived benefits from the user's perspective	in health	0.75	1.00	0.75	3
			Perceived benefits i from the user's perspective	n quality/durability	0.50	1.00	0.50	4
	"Yes"	x	Perceived benefits to society	and ecosystems	0.50	0.50	0.25	5
			Mass Media presence convey	ring a positive image	0.00	1.00	0.00	6
			VIP-Advocates		0.00	0.50	0.00	7
			Local expert grading (score -0.5 and +0.5, see commenta			+/-	0.00	8
	Customer Behavior Risk Score at Sector-Level: 3.0							

Manufacture of Chemicals and Chemical Products

Total

C 20	Manufacture of (Chemicals and che	mical Products	Scoring			Reference
	Physical	Acute		3.0			1
	Climate Risk	Chronic	2.5		2.8	2	
		GHG-Emission C	ontribution	3.5			3
			Probability of regulatory Change	2.5			4
	Transition Climate Risk	Transitional	Economic Impact of regulatory Change	1.0		2.44	5
		Intensity	Technological Change	1.0	1.4		6
			Customer Behavior	1.0			7
		Loss of Biodiversi	ty	Add-on Factor	0.5		8
	Other ESG	Other Environme	ental Risks	Add-on Factor	0.75		9
	Risks	Possible Human I	Rights Issues	Add-on Factor	0.5	2.3	10
		Other Social Risks		Add-on Factor	0.5		11
	ESG-Risk Score at Sector-Level:						7.44

Acute Climate Risk

C 20	Manuf	actu	re of Chemicals and chemical Produ	ıcts	S				Reference	
	Are act	ute c	climate events in the country/region :	alr	eady relevant	Scoring	g			
	for the	sect	tor under consideration?			c	777 * 1.	m . 1		
					"No"	Score	Weight	Total		
	"No"		Is it likely that this relevance will be given in the future?		"Yes"		1.00	0.00	1	
				"Yes, very likely"		1.00	0.00	1		
			Observed loss of assets/property			0.50	1.00	0.50	2	
			Expected impact on revenue			0.50	1.00	0.50	3	
			Expected impact on costs			0.50	1.00	0.50	4	
	"Yes"	x	1-3 expected to increase in the futu	-3 expected to increase in the future		0.50	1.00	0.50	5	
			Lack of adaptability of the business	s m	nodel	0.50	1.00	0.50	6	
			Sectors in the supply chain have a score >2.5 for acute climate risks (see table below)		score >2.5 for	0.25	1.00	0.25	7	
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8		
	Acute	Acute Climate Risk Score at Sector-Level: 3.0								

Chronic Climate Risk

C 20	Manufa	actu	re of Chemicals and chemical Produ	ıcts	3				Reference
	Are cl	ıron	ic climate developments in the	co	ountry/region	Scorin	g		
	already	rele	evant for the sector under considera	tio	n?	Score	Weight	Total	
					"No"	Score	w eight	Total	
	"No"		Is it likely that this relevance will be given in the future?		"Yes"		1.00	0.00	1
					"Yes, very likely"		1.00	0.00	1
			Observed loss of assets/property		0.00	1.00	0.00	2	
			Expected impact on revenue		0.50	1.00	0.50	3	
			Expected impact on costs	osts		0.50	1.00	0.50	4
	"Yes"	'Yes" x 1-3 expected to increase in the future		0.75	1.00	0.75	5		
			Lack of adaptability of the busines	s n	nodel	0.50	1.00	0.50	6
			Sectors in the supply chain have a score >2.5 for acute climate risks (see table below)		score >2.5 for	0.25	1.00	0.25	7
			Local expert grading (score-modif -0.5 and +0.5, see commentary bel				+/-	0.00	8
	Chroni	c Cl	imate Risk Score at Sector-Level:					2.5	Max. 4

GHG Emissions

C 20	Manufacture of Chemical	s and chemical Prod	ucts		Scoring		Reference
	Assignment of a score de				_		
	emissions (X) of the total	emissions of the cou	ntry		Percentage- Range	Total	
	X ≥ 10%						
	10% > X ≥ 7.5%						
	7.5% > X ≥ 5%			x	3.00		
	5% > X ≥ 1%						
	1% > X ≥ 0.5%						
	0.5% > X ≥ 0.25	5%					
		"No"		Add-on Factor 0			
	Do sector activities have a negative impact on carbon sinks?	"Yes"		Add-on Factor 0.5			
		"Yes, severely"		Add-on Factor 1			
	Are sectors in the	"No"		Add-on Factor 0			
	supply chain assessed with significant or	"Yes, score 3 emissions"	x	Add-on Factor 0.25		0.25	
	existential emissions?	"Yes, score 4 emissions"		Add-on Factor 0.5			
	GHG-Emission Contribut	ion Score at Sector-I	evel	:		3.5	Max. 4

Probability of Regulatory Change

C 20	Manuf	actu	are of Chemicals and chemic	cal	Products	Scorin	g		Reference
			siness case of the sector u ted by regulatory change (n						
	to be a	nec	ted by regulatory change (in	.O W	/ ilear future):	Score	Weight	Total	
					"No"				
	"No"		Is this kind of regulation already present in other		"Yes, it is planned"		1.00		
			relevant countries?		"Yes, it is established"		1.00	0.00	1
					"Yes, it is established and a further extention is planned"		1.00		
			Announced in the country under consideration		0.00	1.00	0.00	2	
			Established in the country under consideration Further extension of this very regulation announced		0.50	2.00	1.00	3	
					0.50	0.50	0.25	4	
	"Yes"	x	Announced in other releva	ant	countries	0.50	0.50	0.25	5
			Established in other releva	ınt	countries	0.75	1.00	0.75	6
			Perceived pressure of the context of catastrophes or			0.00	1.00	0.00	7
		_	Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8	
	Probal	Probability of regulatory Change Risk Score at Sector-Level: 2.5							

Impact of Regulatory Change

C 20	Manuf	actı	are of Chemicals and chemical Pro	oducts	Scorin	g		Reference
			that the regulatory change will hof opportunities, risks, costs) on th					
		"No, probability				Weight	Total	
				score < 1.5 or no ESG impact assumed"				
	"No"	Is the assessed score for "Probability of Regulatory Change" > 1.5 AND is an ESG-impact observed in other relevant countries?	"Yes, score > 1.5 and an ESG impact is assumed"	1.00	1.00			
	INO		"Yes, score > 1.5 and an ESG impact is perceived"		0.00	1		
				"Yes, score > 1.5 and a high ESG impact is perceived"		1.00		
			Effect on the business model		0.00	2.00	0.00	2
			Strong effect on the business model		0.00	1.00	0.00	3
			1-2 expected to increase in the f	the future		0.50	0.00	4
	"Yes"	x	1 or 2 obvious in other relevant	countries	0.75	1.00	0.75	5
			Impact on the value chain		0.00	0.50	0.00	6
			Lack of adaptability of the busin	ess model	0.00	1.00	0.00	7
			Local expert grading (score-1-0.5 and +0.5, see commentary b			+/-	0.00	8
	Impact	of	regulatory Change Risk Score at S	ector-Level:			1.0	Max. 4

Technological Change

C 20	Manuf	actı	ure of Chemicals and chemical	Products	Scoring	o o		Reference
		an iabil	alternative technology/r lity-related advantages	~,	500111	5		
			tor in the country under consid		Score	Weight	Total	
				"No"				
			Is this technology	"No, to date it is just at theory/ study- level"		1.00		
	"No" u		available/ used in this sector in other relevant countries?	"Yes, it is available and used in other relevant countries"		1.00	0.00	1
				"Yes, it is heavily used in other relevant countries"		1.00		
			Use in the country under con-	sideration	0.50	1.00	0.50	2
			Heavy use in the country und	er consideration	0.00	1.00	0.00	3
			Use in other relevant countries	es	0.50	0.50	0.25	4
	"Yes"	x	Heavy use in other relevant c	ountries	0.00	1.00	0.00	5
			Accepted economic bene (lower costs and/or higher yie	67	0.00	1.50	0.00	6
			Accepted strong economic be (much lower costs and/or much		0.00	1.00	0.00	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8
	Techn	olog	gical Change Risk Score at Secto	or-Level:			1.0	Max. 4

Customer Behavior

C 20	Manuf	actu	are of Chemicals and chemica	al Products	Scorin	~		Reference
	Are c		omers accepting/demanding ove assessment of	the new technology technological change)	Scoring	.		
	in the	cou	ntry under consideration?	0 0.	Score	Weight	Total	
				"No"				
	"No"		Are customers accepting/ demanding this very technology in other,	"Yes, the use can be recognised in its beginnings"		1.00		
	110		export-relevant countries?	"Yes, the use can be clearly recognised"		1.00	0.00	1
				"Yes, the strong use can be clearly recognised"		1.00		
			Perceived benefits from the user's perspective	in costs/maintenance	0.00	2.00	0.00	2
			Perceived benefits from the user's perspective	in health	0.75	1.00	0.75	3
			Perceived benefits from the user's perspective	in quality/durability	0.00	1.00	0.00	4
	"Yes"	x	Perceived benefits to societ	y and ecosystems	0.75	0.50	0.38	5
			Mass Media presence conve	ying a positive image	0.00	1.00	0.00	6
			VIP-Advocates		0.00	0.50	0.00	7
			Local expert grading (score-0.5 and +0.5, see comments			+/-	0.00	8
	Custor	ner	Behavior Risk Score at Sector	r-Level:			1.0	Max. 4

D. Electricity, Gas, Stream and Air Conditioning Supply

Total

D	Electricity, Gas,	Steam and Air Cor	nditioning Supply	Scoring			Reference
	Physical	Acute		2.5			1
	Climate Risk	Chronic		2.5		2.5	2
		GHG-Emission C	ontribution	4.0			3
			Probability of regulatory Change	3.5		3.31	4
	Transition Climate Risk	Transitional	Economic Impact of regulatory Change	2.5	2.6		5
		Intensity	Technological Change	2.0	2.0		6
			Customer Behavior	2.5			7
		Loss of Biodiversi	ty	Add-on Factor	0.75		8
	Other ESG	Other Environme	ental Risks	Add-on Factor	0.75	2.5	9
	Risks	Possible Human I	Rights Issues	Add-on Factor	0.5	2.5	10
		Other Social Risk	Add-on Factor	0.5		11	
	ESG-Risk Score a		8	8.31			

Acute Climate Risk

D	Electri	city	, Gas, Steam and Air Conditioning Su	ıpp]	ly				Reference
			climate events in the country/region tor under consideration?	alr	eady relevant	Scoring			
	for the	sec	tor under consideration?			Score	Weight	Total	
					"No"				
	"No"	Is it likely that this relevance will be given in the future?		"Yes"		1.00	0.00	1	
					"Yes, very likely"		1.00	0.00	1
			Observed loss of assets/property Expected impact on revenue			0.50	1.00	0.50	2
						0.50	1.00	0.50	3
			Expected impact on costs			0.50	1.00	0.50	4
	"Yes"	x	1-3 expected to increase in the futu	re		0.50	1.00	0.50	5
			Lack of adaptability of the business	mc	odel	0.50	1.00	0.50	6
			Sectors in the supply chain have a score >2.5 for acute climate risks (see table below)			1.00	0.00	7	
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8	
	Acute Climate Risk Score at Sector-Level: 2.5								

Chronic Climate Risk

D	Electric	city,	Gas, Steam and Air Conditioning S	up	ply				Reference	
	Are cl	nron	ic climate developments in the	C	ountry/region	Scorin	g			
	already	rele	evant for the sector under considera	itio	n?	C	W-!-L	T-4-1		
					"No"	Score	weight	Total		
	"No"		Is it likely that this relevance will be given in the future?		"Yes"		1.00	0.00	1	
					"Yes, very likely"		1.00	0.00	1	
	will be given in the future? "Yes, very likely" Observed loss of assets/property Expected impact on revenue 0.50 1.00 0. 0.50 1.00 0.50 0.50 1.00 0.50	0.50	2							
			Expected impact on revenue			0.50	1.00			
			Is it likely that this relevance will be given in the future? "Yes, very likely" 1.00 Observed loss of assets/property 0.50 Expected impact on revenue 0.50 Expected impact on costs 1-3 expected to increase in the future 0.50 Lack of adaptability of the business model Sectors in the supply chain have a score >2.5 for acute climate risks (see table below) Local expert grading (score-modification between -0.5 and +0.5, see commentary below)	0.50	4					
	"Yes"	x	1-3 expected to increase in the fut	ure	2	0.50	1.00	0.50	5	
			Lack of adaptability of the busines	nodel	0.50	1.00	0.50	6		
			•		score >2.5 for		1.00	0.00	7	
						+/-	0.00	8		
	Chroni	c Cl	imate Risk Score at Sector-Level:					2.5	Max. 4	

GHG Emissions

Electricity, Gas, Steam and	Air Conditioning Supp	oly		Scoring		Reference
Assignment of a score dep			ge of the sector	beomg		
emissions (X) of the total en	nissions of the country	,		Percentage- Range	Total	
X ≥ 10%				x	4.00	
10% > X ≥ 7.5%						
7.5% > X ≥ 5%						
5% > X ≥ 1%						
1% > X ≥ 0.5%						
0.5% > X ≥ 0.25%	6					
			•	•		
	"No"		Add-on Factor 0			
Do sector activities have a negative impact on carbon sinks?	"Yes"		Add-on Factor 0.5			
	"Yes, severely"		Add-on Factor 1			
Avo gostowa in the surel	"No"		Add-on Factor 0			
Are sectors in the supply chain assessed with significant or existential	"Yes, score 3 emissions"		Add-on Factor 0.25			
emissions?	"Yes, score 4 emissions"		Add-on Factor 0.5			
GHG-Emission Contribution	n Score at Sector-Leve	l:			4.0	Max. 4

Probability of Regulatory Change

D	Electri	city	, Gas, Steam and Air Condi	itic	oning Supply				Reference
						Scorin	g		
	to be a	iffec	ted by regulatory change (1	nov	w/ near future)!	Score	re Weight Total 1.00 1.00 0.00 1.00 1.00 0.75 2 2.00 1.50 3 0.50 0.50 0.25 5 1.00 0.75 6		
					"No"				
	"No"		Is this kind of regulation already		"Yes, it is planned"		1.00		
	110	relevant countries? "Yes, it is established"					1.00	0.00	1
					"Yes, it is established and a further extention is planned"		1.00		
			Announced in the countr	yι	ınder consideration	0.75	1.00	0.75	2
		the business case of the sector under consideration likely be affected by regulatory change (now/ near future)? Is this kind of regulation already present in other relevant countries? "Yes, it is established" 1.00 0.0 "Yes, it is established and a further extention is planned" 1.00 0.1 Established in the country under consideration 0.75 1.00 0.1 Further extension of this very regulation announced 0.00 0.50 0.1 Established in other relevant countries 0.50 0.50 0.1 Established in other relevant countries 0.75 1.00 0.1 Established in other relevant countries 0.75 1.00 0.1 Consideration 0.75 1.00 0	1.50	3					
	Is the regulate present relevant and the stabling and the	Further extension of this v	ver	y regulation announced	0.00	0.50	0.00	4	
	"Yes"	x	Announced in other relev	van	nt countries	0.50	0.50	0.25	5
			Established in other relev	⁄an	t countries	0.75	1.00	0.75	6
			*		* *	0.00	1.00	0.00	7
					+/-	0.00	8		
	Probal	oilit	y of regulatory Change Risl	k S	core at Sector-Level:			3.5	Max. 4

Impact of Regulatory Change

D	Electri	city	, Gas, Steam and Air Condition	ing Supply	Scorin	g		Reference
			that the regulatory change wil m of opportunities, risks, costs)					tal 100 1 100 2 100 3 100 4
				"No, probability score < 1.5 or no ESG impact assumed"	Score	Weight	Total	
	N.T.		Is the assessed score for "Probability of Regulatory	"Yes, score > 1.5 and an ESG impact is assumed"		1.00		
	"No"		Change" > 1.5 AND is an ESG-impact observed in other relevant countries?	"Yes, score > 1.5 and an ESG impact is perceived"		1.00	0.00	1
				"Yes, score > 1.5 and a high ESG impact is perceived"		1.00		
			Effect on the business model		0.75	2.00	1.50	2
			Strong effect on the business	model	0.00	1.00	0.00	3
			1-2 expected to increase in th	e future	0.00	0.50	0.00	4
	"Yes"	x	1 or 2 obvious in other releva	nt countries	0.75	1.00	0.75	5
			Impact on the value chain		0.00	0.50	0.00	6
			Lack of adaptability of the bus	siness model	0.00	1.00	0.00	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8
	Impac	of :	regulatory Change Risk Score a	t Sector-Level:			2.5	Max. 4

Technological Change

D	Is :	an	9.	methodology with	Scorin	g		Reference
			lity-related advantages tor in the country under consid		Score	Weight	Total	0.00 1 0.50 2 0.00 3 0.38 4 0.00 5
			Is this technology	"No, to date it is just at theory/ study-level"		1.00		
	"No"	available/ used in this sector in other relevant countries? "Yes, it is available and used in other relevant countries"				1.00	0.00	1
				"Yes, it is heavily used in other relevant countries"		1.00		
			Use in the country under cor	nsideration	0.50	1.00	0.50	2
			Heavy use in the country und	der consideration	0.00	1.00	0.00	3
			Use in other relevant countri	ies	0.75	0.50	0.38	4
	"Yes"	x	Heavy use in other relevant of	countries	0.00	1.00	0.00	5
			Accepted economic bend (lower costs and/or higher yi	0,	0.75	1.50	1.13	6
			Accepted strong economic l (much lower costs and/or mu		0.00	1.00	0.00	7
		Local expert grading (score-modific -0.5 and +0.5, see commentary below			+/-	0.00	8	
	Techn	olog	gical Change Risk Score at Sect	or-Level:			2.0	Max. 4

Customer Behavior

D	Electri	city	, Gas, Steam and Air Conditio	oning Supply	Scorin	Q		Reference
	(see	ab	pove assessment of	the new technology technological change)				
	in the	cou	ntry under consideration?					
	"No"	Are customers accepting/ demanding this very technology in other, "Vest the use can be			1.00			
	110		technology in other, export-relevant countries?		1.00	0.00	1	
		can		can be		1.00		
			Perceived benefits from the user's perspective	in costs/maintenance	0.75	2.00	1.50	2
			Perceived benefits from the user's perspective	in health	0.75	1.00	0.75	3
			Perceived benefits from the user's perspective	in quality/durability	0.50	1.00	0.50	4
	"Yes"	x	Perceived benefits to society	and ecosystems	0.50	0.50	0.25	5
			Mass Media presence convey	ying a positive image	0.00	1.00	0.00	6
			VIP-Advocates		0.00	0.50	0.00	7
			Local expert grading (sco -0.5 and +0.5, see commenta		-0.50	+/-	-0.50	8
	Custor	ner	Behavior Risk Score at Sector	-Level:			2.5	Max. 4

E. Water Supply, Sewerage, Waste Management and Remediation Activities

Total

0	Water Supply, Ser Activities	werage, Waste Mai	nagement and Remediation	Scoring			Reference
	Physical Climate Risk Transition Climate Risk Other ESG Risks	Acute		1.5			1
		Chronic		2.5		2.0	2
		GHG-Emission Co	ontribution	3.0	0.5		3
			Probability of regulatory Change	3.5		2.63	4
	Transition Climate Risk Tra Int	Transitional	Economic Impact of regulatory Change	2.0	2.2		5
		Intensity	Technological Change	1.5	2.3		6
		Customer Behavior	Customer Behavior	2.0			7
		Loss of Biodiversi	ty	Add-on Factor	0.5	3 4 2.63 5 6 7 8 9 2.3	8
	Climate Risk Tra Int Los Other ESG Risks	Other Environme	ntal Risks	Add-on Factor	0.75		9
	Other ESG Risks	Transitional Intensity Technological Change 1.5 Customer Behavior 2.3 Loss of Biodiversity Add-on Factor Other Environmental Risks Add-on Factor Add-on Factor 0.75	2.3	10			
		Other Social Risks	3		0.5		11
	ESG-Risk Score a	t Sector-Level:				7	6.88

Acute Climate Risk

Е	Water Activit	_	oply, Sewerage, Waste Management a	and	Remediation				Reference
			climate events in the country/region alm	eac	ly relevant for	Scorin	g		
	the sec	tor	under consideration?			Score	Weight	Total	
					"No"	Score	Weight	Total	
	"No"		Is it likely that this relevance will be given in the future?		"Yes"		1.00	0.00	1
					"Yes, very likely"		1.00	0.00	1
			Observed loss of assets/property			0.50	1.00	0.50	2
			Expected impact on revenue			0.00	1.00	0.00	3
			Expected impact on costs			0.50	1.00	0.50	4
	"Yes"	x	1-3 expected to increase in the future	e		0.00	1.00	0.00	5
			Lack of adaptability of the business n	nod	lel	0.50	1.00	0.50	6
			Sectors in the supply chain have a sci climate risks (see table below)	ore	>2.5 for acute	0.00	1.00	0.00	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)				+/-	0.00	8
	Acute	 Clin	nate Risk Score at Sector-Level:					1.5	Max. 4

Chronic Climate Risk

Е	Water Activit	_	ply, Sewerage, Waste Management	and	Remediation				Reference
	Are ch	roni	c climate developments in the count	ry/ı	region already	Scoring	g		
	relevan	it foi	r the sector under consideration?			c	777 * 1.	m . 1	
					"No"	Score	Weight	Total	
	"No"		Is it likely that this relevance will be given in the future?		"Yes"		1.00	0.00	1
					"Yes, very likely"		1.00	0.00	1
			Observed loss of assets/property			0.50	1.00	0.50	2
Are chronic climate developments in the country/region already relevant for the sector under consideration? Score Williams of the sector under consideration? Is it likely that this relevance will be given in the future? Observed loss of assets/property Observed loss of assets/property Expected impact on revenue Expected impact on costs 1.4 Expected impact on costs 1.5 Tyes x 1-3 expected to increase in the future Lack of adaptability of the business model Sectors in the supply chain have a score >2.5 for acute climate risks (see table below) Local expert grading (score-modification between	1.00	0.00	3						
			Expected impact on costs			0.50	1.00	0.50	4
	"Yes"	x	1-3 expected to increase in the future			0.75	1.00	0.75	5
			Lack of adaptability of the business m	ode	ıl	0.50	1.00	0.50	6
			•	ore	>2.5 for acute	0.00	1.00	0.00	7
				tion between		+/-	0.00	8	
	Chroni	c Cl	imate Risk Score at Sector-Level:					2.5	Max. 4

GHG Emissions

E Water Supply, Sewerage, Activities	Waste Management	an	d Remediation	Scoring		Reference
Assignment of a score dep	pending on the percen	ntag	ge of the sector			
emissions (X) of the total en				Percentage- Range	Total	
X ≥ 10%						
10% > X ≥ 7.5%						
7.5% > X ≥ 5%			x	3.00		
5% > X ≥ 1%						
1% > X ≥ 0.5%						
0.5% > X ≥ 0.259	%					
	"No"		Add-on Factor 0			
Do sector activities have a negative impact on carbon sinks?	"Yes"		Add-on Factor 0.5			
	"Yes, severely"		Add-on Factor 1			
Are costors in the sumb-	"No" Factor					
Are sectors in the supply chain assessed with significant or existential	"Yes, score 3 emissions"		Add-on Factor 0.25			
emissions?	"Yes, score 4 emissions"		Add-on Factor 0.5			
GHG-Emission Contribution	on Score at Sector-Leve	el:			3.0	Max. 4

Probability of Regulatory Change

E	Water Activit	-	pply, Sewerage, Waste Mar	nago	ement and Remediation				Reference
	Is the	bus	iness case of the sector ι	ınd	ler consideration likely	Scorin	g		
	to be a	ffec	ted by regulatory change ((no	w/ near future)?	Score	Weight	Total	
					"No"	Score	Weight	Total	
	"No"		Is this kind of regulation already		"Yes, it is planned"		1.00		
	NO		present in other relevant countries?		"Yes, it is established"		1.00	0.00	1
					"Yes, it is established and a further extention is planned"		1.00		
			Announced in the count	ry 1	under consideration	0.75	1.00	0.75	2
			Established in the countr	ry t	ınder consideration	0.75	2.00	1.50	
			Further extension of announced	· 1	this very regulation	0.50	0.50	0.25	4
	"Yes"	x	Announced in other rele	vai	nt countries	0.50	0.50	0.25	5
			Established in other rele	van	nt countries	0.75	1.00	0.75	6
			Perceived pressure of t			0.00	1.00	0.00	7
			Local expert grading (so -0.5 and +0.5, see comme				+/-	0.00	8
	Probat	oilit	y of regulatory Change Ris	sk S	Score at Sector-Level:			3.5	Max. 4

Impact of Regulatory Change

Е	Water Activit	_	ply, Sewerage, Waste Manageme	ent and Remediation	Scorin	g		Reference
			that the regulatory change will m of opportunities, risks, costs) o					
				"No, probability score < 1.5 or no ESG impact assumed"	Score	Weight	Total	
			Is the assessed score for "Probability of Regulatory	"Yes, score > 1.5 and an ESG impact is assumed"		1.00		
	"No"		Change" > 1.5 AND is an ESG-impact observed in other relevant countries?	"Yes, score > 1.5 and an ESG impact is perceived"		1.00	0.00	1
				"Yes, score > 1.5 and a high ESG impact is perceived"		1.00		
			Effect on the business model		0.75	2.00	1.50	2
			Strong effect on the business m	odel	0.00	1.00	0.00	3
			1-2 expected to increase in the	future	0.00	0.50	0.00	4
	"Yes"	x	1 or 2 obvious in other relevant	countries	0.00	1.00	0.00	5
			Impact on the value chain		0.50	0.50	0.25	6
			Lack of adaptability of the busin	ness model	0.00	1.00	0.00	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8
	Impac	t of	regulatory Change Risk Score at	Sector-Level:			2.0	Max. 4

Technological Change

Е	Water Activit		pply, Sewerage, Waste Manage	ment and Remediation	Scorin	σ		Reference
	Is sustain	an iabi			Scoring	5	1	
			"No" Score Weight "No" "No, to date it is just at theory/ study-level" "Yes, it is available and used in other relevant countries" "Yes, it is heavily used in other relevant countries" "Yes, it is heavily used in other relevant countries" "Yes, it is heavily used in other relevant countries" "Yes, it is heavily used in other relevant countries" "Yes, it is heavily used in other relevant countries" 0.50 1.00 Heavy use in the country under consideration 0.50 1.00 1.00 Heavy use in other relevant countries 0.50 0.50 1.50 Accepted economic benefit of technology lower costs and/or higher yields) 0.50 1.50 1.50 Accepted strong economic benefit of technology much lower costs and/or much higher yields) 0.00 1	Weight	Total			
				"No"				
			Is this technology available/	just at theory/ study-		1.00	0.00 1 0.50 2 0.00 3 0.25 4 0.00 5 0.75 6 0.00 7	
	"No"		used in this sector in other relevant countries?	and used in other relevant		1.00	0.00	1
				used in other relevant		1.00		
			Use in the country under cons	ideration	0.50	1.00	0.50	2
			Heavy use in the country unde	er consideration	0.00	1.00	0.00	3
			Use in other relevant countries	3	0.50	0.50	0.25	4
	"Yes"	x	Heavy use in other relevant co	untries	0.00	1.00	0.00	5
			_	07	0.50	1.50	0.75	6
			_	2,	0.00	1.00	0.00	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8
	Techn	olog	gical Change Risk Score at Sector	-Level:			1.5	Max. 4

Customer Behavior

E	Water Activit		pply, Sewerage, Waste Manag	gement and Remediation				Reference
			comers accepting/demanding		Scorin	g		
	(see in the		ntry under consideration?	technological change)	Score	Weight	Total	
				"No"	Score	Weight	Total	
	"No"		Are customers accepting/ demanding this very	"Yes, the use can be recognised in its beginnings"		1.00		
			technology in other, export- relevant countries?	"Yes, the use can be clearly recognised"		1.00	0.00	1
				"Yes, the strong use can be clearly recognised"		1.00		
			Perceived benefits i from the user's perspective	in costs/maintenance	0.50	2.00	1.00	2
			Perceived benefits from the user's perspective	in health	0.50	1.00	0.50	3
	"Yes"		Perceived benefits from the user's perspective	in quality/durability	0.00	1.00	0.00	4
	"Yes"	x	Perceived benefits to society a	nd ecosystems	0.50	0.50	0.25	5
			Mass Media presence conveyir	ng a positive image	0.00	1.00	0.00	6
			VIP-Advocates		0.00	0.50	0.00	7
			Local expert grading (score-0.5 and +0.5, see commentary			+/-	0.00	8
	Custor	ner	Behavior Risk Score at Sector-L	evel:			2.0	Max. 4

F. Construction

Total

F	Construction			Scoring			Reference
	Physical	Acute		2.0			1
	Climate Risk	Chronic		2.0		2.0	2
		GHG-Emission C	ontribution	3.0			3
			Probability of regulatory Change	2.5			4
	Transition Climate Risk	Transitional	Economic Impact of regulatory Change	1.5	1.9	2.44	5
		Intensity	Technological Change	1.5	1.9		6
			Customer Behavior	2.0			7
		Loss of Biodiversi	ty	Add-on Factor	0.75		8
	Other ESG	Other Environme	ental Risks	Add-on Factor	0.5	2.0	9
	Risks	Possible Human I	Rights Issues	Add-on Factor	0.75	2.8	10
		Other Social Risk	s	Add-on Factor	0.75		11
	ESG-Risk Score a	nt Sector-Level:				7	7.19

Acute Climate Risk

F	Constr	ucti	on						Reference	
			climate events in the country/region alr	eac	ly relevant for	Scorin	g			
	the sec	tor 1	under consideration?			Score	Weight	Total	1 2 3 4 5 6 7	
					"No"					
	"No"		Is it likely that this relevance will be given in the future?		"Yes"		1.00	0.00	1	
					"Yes, very likely"		1.00	- 0.00		
			Observed loss of assets/property			0.00	1.00	0.00	2	
			Expected impact on revenue			0.50	1.00	0.50	3	
			Expected impact on costs			0.50	1.00	0.50	4	
	"Yes"	x	1-3 expected to increase in the future			0.00	1.00	0.00	5	
			Lack of adaptability of the business mo	ode	el	0.50	1.00	0.50	6	
			Sectors in the supply chain have a sco climate risks (see table below)	ore	>2.5 for acute	0.00	1.00	0.00	7	
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			0.50	+/-	0.50	8	
	Acute	Acute Climate Risk Score at Sector-Level: 2.0								

Chronic Climate Risk

F	Constru	uctio	on						Reference
			c climate developments in the countr	ry/re	egion already	Scorin	g		
	relevan	it fo	r the sector under consideration?			Score	Weight	Total	1 2 3 4 5 6
					"No"	Score	weight	Total	
	"No"		Is it likely that this relevance will be given in the future?		"Yes"		1.00	0.00	1
					"Yes, very likely"		1.00		1
	"Yes"		Observed loss of assets/property			0.00	1.00	0.00	2
			Expected impact on revenue			0.50	1.00	0.50	3
			Expected impact on costs			0.50	1.00	0.50	4
	"Yes"	x	1-3 expected to increase in the futur	re		0.00	1.00	0.00	5
			Lack of adaptability of the business	mod	del	0.50	1.00	0.50	6
			Sectors in the supply chain have acute climate risks (see table below)		core >2.5 for	0.00	1.00	0.00	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)		0.50	+/-	0.50	8	
	Chronic Climate Risk Score at Sector-Level: 2.0							Max. 4	

GHG Emissions

F	Construction				Scoring		Reference
	Assignment of a score de						
	emissions (X) of the total	emissions of the cou	ntry		Percentage- Range	Total	
	X ≥ 10%						
	10% > X ≥ 7.5%						
	7.5% > X ≥ 5%)					
	5% > X ≥ 1%			x	2.50		
	1% > X ≥ 0.5%	,					
	0.5% > X ≥ 0.2	5%					
	<u> </u>			ī			
		"No"		Add-on Factor 0			
	Do sector activities have a negative impact on carbon sinks?	"Yes"	x	Add-on Factor 0.5		0.25	
		"Yes, severely"		Add-on Factor 1			
	Are sectors in the	"No"	Add-on Factor 0				
	supply chain assessed with significant or existential emissions?	"Yes, score 3 emissions"	x	Add-on Factor 0.25		0.25	
	existential emissions?	"Yes, score 4 emissions"		Add-on Factor 0.5			
	GHG-Emission Contribut	tion Score at Sector-I	Level	l:		3.0	Max. 4

Probability of Regulatory Change

F	Constr	ucti	on			1.00			Reference
			iness case of the sector ι			Scoring	5		
	to be a	ffec	ted by regulatory change (nor	w/ near future)?	Score	Weight	Total	al 1
					"No"				
	"No"		Is this kind of regulation already		"Yes, it is planned"		1.00		
	110		present in other relevant countries?		"Yes, it is established"		1.00	0.00	1
					"Yes, it is established and a further extention is planned"		1.00		
			Announced in the country	ry ι	ınder consideration	0.00	1.00	0.00	2
			Established in the countr	y u	ınder consideration	0.75	2.00	1.50	3
			Further extension of announced	1	this very regulation	0.00	0.50	0.00	4
	"Yes"	x	Announced in other rele	var	nt countries	0.25	0.50	0.13	5
			Established in other relev	van	t countries	0.75	1.00	0.75	6
			Perceived pressure of to context of catastrophes o			0.00	1.00	0.00	7
		-	Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8	
	Probab	oilit	y of regulatory Change Ris	k S	core at Sector-Level:			2.5	Max. 4

Impact of Regulatory Change

F	Constr	ucti	ion		Scoring	σ		Reference
			y that the regulatory change will		beorm	5		
	(III tile	101	m of opportunities, risks, costs) o	"No, probability	Score	Weight	Total	
				score < 1.5 or no ESG impact assumed"	Score	Weight	Total	
	N.T.		Is the assessed score for "Probability of Regulatory	"Yes, score > 1.5 and an ESG impact is assumed"		1.00		
	"No"		Change" > 1.5 AND is an ESG- impact observed in other relevant countries?	"Yes, score > 1.5 and an ESG impact is perceived"		1.00	0.00	1
				"Yes, score > 1.5 and a high ESG impact is perceived"		1.00		
			Effect on the business model		0.75	2.00	1.50	2
			Strong effect on the business me	odel	0.00	1.00	0.00	3
			1-2 expected to increase in the	future	0.00	0.50	0.00	4
	"Yes"	x	1 or 2 obvious in other relevant	countries	0.00	1.00	0.00	5
			Impact on the value chain		0.00	0.50	0.00	6
			Lack of adaptability of the busin	ness model	0.00	1.00	0.00	7
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8
	Impact	of	regulatory Change Risk Score at S	Sector-Level:			1.5	Max. 4

Technological Change

Constr	an	alternative technology/		Scorin	g		Reference
		lity-related advantages tor in the country under considera	available/used tion? "No"	Score	Weight	0.00 1 0.00 1 0.25 2 0.00 3 0.25 4 0.00 5	
			"No, to date it is just at theory/ study-level"		1.00		
"No"		Is this technology available/used in this sector in other relevant countries?	"Yes, it is available and used in other relevant countries"		1.00	0.00	1
			"Yes, it is heavily used in other relevant countries"		1.00		
		Use in the country under conside	ration	0.25	1.00	0.25	2
"Yes, used in o	consideration	0.00	1.00	0.00	3		
		Use in other relevant countries		0.50	0.50	0.25	4
"Yes" x	x	Heavy use in other relevant coun	tries	0.00	1.00	0.00	5
		Accepted economic beneficioner costs and/or higher yields	07	0.50	1.50	0.75	6
		Accepted strong economic be (much lower costs and/or much be)		0.00	1.00	0.00	7
		Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8
Techn	olog	gical Change Risk Score at Sector-L	evel:			1.5	Max. 4

Customer Behavior

F	Constr	ucti	ion		Scoring Score Weight Total 1.00 1.00 0.00			Reference
	Are (see		tomers accepting/demanding bove assessment of t	the new technology technological change)	Scoring	5	1	
	in the	cou	ntry under consideration?	<i>3</i>	Score	Weight	Total	
				"No"				
	"No"		Are customers accepting/ demanding this very	"Yes, the use can be recognised in its beginnings"		1.00		
			technology in other, export-relevant countries?	"Yes, the use can be clearly recognised"		1.00	0.00	1
				"Yes, the strong use can be clearly recognised"		1.00		
			Perceived benefits is from the user's perspective	n costs/maintenance	0.50	2.00	1.00	2
			Perceived benefits from the user's perspective	in health	0.50	1.00	0.50	3
			Perceived benefits if from the user's perspective	in quality/durability	0.50	1.00	0.50	4
	"Yes"	x	Perceived benefits to society an	nd ecosystems	0.50	0.50	0.25	5
			Mass Media presence conveyin	ng a positive image	0.00	1.00	0.00	6
			VIP-Advocates		0.00	0.50	0.00	7
			Local expert grading (scor -0.5 and +0.5, see commentary		-0.50	+/-	-0.50	8
	Custor	ner	Behavior Risk Score at Sector-Le	evel:			2.0	Max. 4

G. Transportation and Storage

Total

н	Transportation an	nd Storage		Scoring			Reference
	Physical Climate Risk Transition Climate Risk	Acute		3.0		3.0	1
		Chronic		3.0		3.0	2
		GHG-Emission Co	ontribution	4.0			3
	Physical Climate Risk Crimate Risk Transition Climate Risk Transition Climate Risk Other ESG Risks		Probability of regulatory Change	2.0			4
				Economic Impact of regulatory Change	1.5	1.3	2.63
		Intensity	Technological Change	1.0	1.5		6
		Customer Behavior		0.5			7
		Loss of Biodiversit	у	Add-on Factor	0.75		8
		Other Environme	ntal Risks	Add-on Factor	0.75	2.75	9
	Other ESG Risks	Possible Human R	ights Issues	Add-on Factor	0.5	2.75	10
		Other Social Risks		Add-on Factor	0.75		11
	ESG-Risk Score at	: Sector-Level:				8	8.38

Acute Climate Risk

Н	Transp	orta	tion and Storage					Reference
			climate events in the country/region alread	ly relevant for the	Scorin	g		
	sector	und	er consideration?		Score	Weight	Total	
				"No"				
	"No"		Is it likely that this relevance will be given in the future?	"Yes"		1.00	0.00	1
				"Yes, very likely"		1.00	0.00	1
			Observed loss of assets/property		0.75	1.00	0.75	2
			Expected impact on revenue		0.50	1.00	0.50	3
			Expected impact on costs		0.75	1.00	0.75	4
	"Yes"	x	1-3 expected to increase in the future		0.50	1.00	0.50	5
			Lack of adaptability of the business mod	lel	0.50	1.00	0.50	6
			Sectors in the supply chain have a sco climate risks (see table below)	ore >2.5 for acute		1.00	0.00	7
			Local expert grading (score-modif -0.5 and +0.5, see commentary below)	ication between		+/-	0.00	8
	Acute	Clin	nate Risk Score at Sector-Level:				3.0	Max. 4

Chronic Climate Risk

Н	Transportation and Storage							Reference		
		Are chronic climate developments in the country/region already relevant for the sector under consideration?					g			
	relevan						Weight	Total		
			Is it likely that this relevance will be given in the future?		"No"					
	"No"				"Yes"	1.00	0.00	1		
					"Yes, very likely"		1.00	0.00	1	
			Observed loss of assets/property		0.50	1.00	0.50	2		
			Expected impact on revenue			0.50	1.00	0.50	3	
			Expected impact on costs		0.75	1.00	0.75	4		
	"Yes"	x	s" x	1-3 expected to increase in the futur	e		0.50	1.00	0.50	5
			Lack of adaptability of the business 1	e business model		0.50	1.00	0.50	6	
			Sectors in the supply chain have a score >2.5 for acute climate risks (see table below)			1.00	0.00	7		
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8		
	Chroni	c Cl	imate Risk Score at Sector-Level:					3.0	Max. 4	

GHG Emissions

Transportation and Storage	Scoring	Reference					
Assignment of a score dep	beomig						
emissions (X) of the total e	Percentage- Range	Total					
X ≥ 10%	x	4.00					
10% > X ≥ 7.5%	$10\% > X \ge 7.5\%$						
7.5% > X ≥ 5%	7.5% > X ≥ 5%						
5% > X ≥ 1%							
1% > X ≥ 0.5%							
0.5% > X ≥ 0.25	%						
	"No"		Add-on Factor 0				
Do sector activities have a negative impact on carbon sinks?	"Yes"		Add-on Factor 0.5				
Curous same.	"Yes, severely"		Add-on Factor 1				
Are sectors in the supply	"No"		Add-on Factor 0				
chain assessed with significant or existential	"Yes, score 3 emissions"		Add-on Factor 0.25				
emissions?	"Yes, score 4 emissions"		Add-on Factor 0.5				
GHG-Emission Contribution	on Score at Sector-Lev	el:			4.0	Max. 4	

Probability of Regulatory Change

Н	Transp	Transportation and Storage				Scoring	Reference		
		Is the business case of the sector under consideration likely to be affected by regulatory change (now/ near future)?					Woight		
			Is this kind of regulation already present in other relevant countries?	""	No"	Score	Weight	Total	
	"No"			117	Yes, it is planned"	1.00			
				113	Yes, it is established"		1.00	0.00	1
				a	Yes, it is established and a further extention is planned"		1.00		
			Announced in the country under consideration		0.75	1.00	0.75	2	
			Established in the country under consideration		0.00	2.00	0.00	3	
			Further extension of this very regulation announced		0.00	0.50	0.00	4	
	"Yes"	x	Announced in other relevant countries		0.50	0.50	0.25	5	
			Established in other relevant countries		0.75	1.00	0.75	6	
			Perceived pressure of the population i.e. in the context of catastrophes or severe economic losses		0.00	1.00	0.00	7	
			Local expert grading (score-modification between -0.5 and +0.5, see commentary below)			+/-	0.00	8	
	Probability of regulatory Change Risk Score at Sector-Level: 2.0								Max. 4

Impact of Regulatory Change

Н	Transportation and Storage					g	Reference	
			that the regulatory change wil m of opportunities, risks, costs) o					
			Is the assessed score for "Probability of Regulatory Change" > 1.5 AND is an ESG-impact observed in other relevant countries?	"No, probability score < 1.5 or no ESG impact assumed"	Score	Weight	Total	
	"No"			"Yes, score > 1.5 and an ESG impact is assumed"		1.00		
				"Yes, score > 1.5 and an ESG impact is perceived"		1.00	0.00	1
				"Yes, score > 1.5 and a high ESG impact is perceived"		1.00		
			Effect on the business model		0.00	2.00	0.00	2
			Strong effect on the business n	nodel	0.00	1.00	0.00	3
			1-2 expected to increase in the future 1 or 2 obvious in other relevant countries Impact on the value chain Lack of adaptability of the business model		0.50	0.50	0.25	4
	"Yes"	x			0.75	1.00	0.75	5
					0.75	0.50	0.38	6
					0.00	1.00	0.00	7
			Local expert grading (score-re-o.5 and +0.5, see commentary			+/-	0.00	8
	Impac	t of	regulatory Change Risk Score at	Sector-Level:			1.5	Max. 4

Technological Change

Н	Transportation and Storage					g	Reference	
	Is sustair	an alternative technology/methodology with ustainability-related advantages available/used			Scoring			
	in this	sect	tor in the country under conside	Score	Weight	Total		
	"No"		Is this technology available/ used in this sector in other relevant countries?	"No, to date it is just at theory/ study-level"		1.00		
				"Yes, it is available and used in other relevant countries"		1.00		1
				"Yes, it is heavily used in other relevant countries"		1.00		
			Use in the country under consideration Heavy use in the country under consideration			1.00	0.75	2
						1.00	0.00	3
			Use in other relevant countries		0.50	0.50	0.25	4
	"Yes"	x	Heavy use in other relevant countries	untries	0.00	1.00	0.00	5
			Accepted economic benefit of technology (lower costs and/or higher yields)			1.50	0.00	6
			Accepted strong economic benefit of technology (much lower costs and/or much higher yields)			1.00	0.00	7
			Local expert grading (score -0.5 and +0.5, see commentary			+/-	0.00	8
	Techn	olog	rical Change Risk Score at Sector	-Level:			1.0	Max. 4

Customer Behavior

Н	Transp	ort	ation and Storage	Scoring			Reference	
	Are c	customers accepting/demanding the new technology above assessment of technological change)						
	in the	cou	ntry under consideration?	Score	Weight	Total		
				"No"				
	"No"		Are customers accepting/ demanding this very technology in other, export-relevant countries?	"Yes, the use can be recognised in its beginnings"		1.00		
				"Yes, the use can be clearly recognised"		1.00 0.00	0.00	1
				"Yes, the strong use can be clearly recognised"		1.00		
	"Yes"		Perceived benefits from the user's perspective	in costs/maintenance	0.00	2.00	0.00	2
			Perceived benefits from the user's perspective		0.50	1.00	0.50	3
			Perceived benefits from the user's perspective	in quality/durability	0.00	1.00	0.00	4
		x	Perceived benefits to society and ecosystems Mass Media presence conveying a positive image VIP-Advocates		0.50	0.50	0.25	5
					0.00	1.00	0.00	6
					0.00	0.50	0.00	7
			Local expert grading (score-0.5 and +0.5, see commen		-0.50	+/-	-0.50	8
	Custor	ner	Behavior Risk Score at Secto	or-Level:			0.5	Max. 4

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