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Instruction sheet on supplier risk groups

Deutsche Bahn AG and its affiliated companies define the term "risk group" in the sense of "CSR risks" (corporate social responsibility risks) that a supplier/business partner exhibits due to:

- 1.) its sector or activity, and/or
- 2.) its geographical place of business or the location of its production facilities, and/or
- 3.) the supply chain to which it belongs.

In the following, the above-mentioned criteria are defined and the methodology to be derived from these for determining the so-called 'risk group' is illustrated. Both the criteria and the methodology are reviewed every 2 years and adjusted if necessary.

1. Sector risk

Sectors with a significant risk of negative impacts on the environment, working conditions and human rights are referred to as high-risk sectors. The high-risk sectors are listed in Table 1. They are factored into the overall rating (cf. point 4) with **2 points**:

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Sector	Risk category	Risk topics (excerpts)
Mining and quarrying		Water pollution, health and safety, ecosystem, disaster risk, lasting contamination
Chemicals, plastics and paints		Water pollution, garbage, air pollution, health and safety, disaster risk, lasting contamination
Iron, steel and other metals		Energy, waste, air pollution, health and safety, lasting contamination
Electronic products		Water pollution, lasting contamination
Power supply		Energy, water consumption, air pollution
Timber products		Health and safety, ecosystem, disaster risk
Agriculture and horticulture		Water consumption/pollution (fertilizers, insecticides, fungicides and herbicides), deforestation, loss of biodiversity, critical working conditions, conflicts over land rights and air pollution (e.g. palm oil)
Food and beverage industry		Water consumption, occupational health and safety
Metal products and machines		Water pollution, waste and lasting contamination
Oil and gas		Energy, water pollution, ecosystem, disaster risk, lasting contamination
Pharmaceuticals		Water pollution, health and safety, disaster risk, lasting contamination
Recycling and waste treatment		Water pollution, waste, air pollution, health and safety, lasting contamination
Footwear and leather goods		Water pollution and lasting contamination, occupational health and safety and forced labor
Textiles and clothing		Water pollution and lasting contamination, water consumption, waste, labor rights (forced labor, occupational health and safety, contracts, etc.)
Cement and concrete		Energy consumption, air pollution, health & safety

Table 1: High-risk sectors and risk topics (excerpts) according to First for Sustainability - ESAT Environmental and Social Assessment Tool and KPMG risk analysis for Agreements on International Responsible Business Conduct - IRBC



2. Country risk:

Countries with a significant risk of human rights abuses and of non-compliance with environmental, social and governance standards by companies and investors are referred to as risk countries. The risk indices by country are calculated by the global risk and management consulting firm Verisk Maplecroft and are shown in Table 2. Countries are categorized into 4 risk areas - accordingly, Low is used with 0 points, Medium with 1 point, High with 2 points and Extreme with 3 points for the overall rating (cf. Section 4).

Key

The index value refers to a scale of 0-10, where 0 defines the highest risk and 10 the lowest risk. The risk categories depending on the index value are as follows:

Extreme 0-
2.5



High
>2.5-5



Medium >5-
7.5



Low >7.5-
10





Country	Risk index
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Land	Risikoindex	Land	Risikoindex	Land	Risikoindex	Land	Risikoindex
Yemen	1,64	Nicaragua	4,10	Belize	5,16	Cyprus	6,48
North Korea	1,66	Laos	4,11	Lesotho	5,22	Israel	6,51
Somalia	1,72	Dominican Republic	4,20	Bahrain	5,23	Georgia	6,53
South Sudan	2,09	Tajikistan	4,24	Oman	5,24	Italy	6,63
Syria	2,24	Vietnam	4,24	Morocco	5,24	Taiwan	6,68
DR Congo	2,40	Swaziland	4,25	Moldova	5,28	Poland	6,71
Eritrea	2,46	Zambia	4,25	Azerbaijan	5,28	United States	6,72
Central African Republic	2,48	Algeria	4,31	Rwanda	5,36	Malta	6,80
Libya	2,50	China	4,32	Brunei	5,38	Singapore	6,83
Iran	2,63	Honduras	4,32	Fiji	5,39	Tuvalu	6,85
Venezuela	2,81	Uganda	4,38	Tunisia	5,39	Samoa	6,86
Sudan	2,83	Russia	4,39	Malaysia	5,47	Uruguay	6,93
Myanmar	2,97	Suriname	4,42	Qatar	5,49	Chile	6,99
Burundi	3,15	Maldives	4,43	Trinidad and Tobago	5,52	Czech Republic	7,04
Chad	3,22	Timor-Leste	4,43	Tonga	5,52	Mauritius	7,07
Haiti	3,35	Nepal	4,45	Namibia	5,56	Hong Kong (China)	7,11
Pakistan	3,38	Egypt	4,45	Seychelles	5,56	Croatia	7,18
Mali	3,42	Kuwait	4,45	Kiribati	5,57	Spain	7,20
Equatorial Guinea	3,43	India	4,46	South Africa	5,60	Japan	7,21
Congo	3,44	Kyrgyzstan	4,50	Panama	5,61	South Korea	7,30
Madagascar	3,47	Philippines	4,56	United Arab Emirates	5,64	Slovakia	7,34
Zimbabwe	3,50	Palestinian Occupied Territory	4,57	Bosnia and Herzegovina	5,68	Macau (China)	7,34
Bangladesh	3,50	Senegal	4,63	Nauru	5,68	Portugal	7,36
Cameroon	3,50	Indonesia	4,64	Kosovo	5,70	San Marino	7,44
Cuba	3,53	Peru	4,65	Marshall Islands	5,78	Latvia	7,54
Turkmenistan	3,53	Paraguay	4,65	Albania	5,78	Slovenia	7,61
Afghanistan	3,53	Togo	4,66	Jamaica	5,80	Lithuania	7,82
Angola	3,60	Sri Lanka	4,69	Serbia	5,80	Australia	7,85
Gabon	3,61	Ecuador	4,70	Palau	5,81	Belgium	7,91
Mauritania	3,66	Guatemala	4,71	Micronesia	5,82	Switzerland	8,00
Guinea	3,69	Saudi Arabia	4,72	Romania	5,82	Estonia	8,06
Iraq	3,70	Turkey	4,73	Bahamas	5,86	Andorra	8,11
Guinea-Bissau	3,71	Ghana	4,75	Montenegro	5,87	Canada	8,11
The Gambia	3,72	Ukraine	4,77	Botswana	5,87	Iceland	8,14
Uzbekistan	3,76	Thailand	4,80	Armenia	5,92	France	8,21
Ethiopia	3,83	Comoros	4,82	Vanuatu	5,93	Germany	8,22
Cambodia	3,87	Guyana	4,84	Bulgaria	5,95	Ireland	8,23
Benin	3,88	Solomon Islands	4,85	Macedonia	5,99	Monaco	8,25
Liberia	3,90	Malawi	4,88	Greece	6,11	Austria	8,25
Sierra Leone	3,92	Brazil	4,92	Bhutan	6,21	United Kingdom	8,26
Lebanon	3,92	Kenya	4,94	Antigua and Barbuda	6,21	Luxembourg	8,32
Niger	3,93	Mexico	4,95	Cabo Verde	6,22	New Zealand	8,34
Bolivia	3,96	Colombia	4,96	Saint Vincent and the Grenadines	6,26	Netherlands	8,35
Côte d'Ivoire	3,99	Mongolia	4,98	Barbados	6,28	Sweden	8,45
Tanzania	3,99	El Salvador	4,98	Costa Rica	6,31	Liechtenstein	8,52
Papua New Guinea	4,00	Jordan	5,05	Saint Kitts and Nevis	6,32	Finland	8,73
Burkina Faso	4,01	Kazakhstan	5,11	Grenada	6,35	Norway	8,87
Mozambique	4,05	Argentina	5,13	Dominica	6,37	Denmark	9,08
Djibouti	4,06	Sao Tome and Principe	5,14	Hungary	6,37		
Nigeria	4,10	Belarus	5,15	Saint Lucia	6,45		

Table 2: Risk indices according to Verisk Maplecroft Portal (<https://portal.maplecroft.com>)



3. Supply chain risk

High-risk supply chains are value chains with a significant risk of negative impacts on working conditions and human rights (social risks). The social risks of the supply chain are determined and made comparable on the basis of a multi-regional input/output calculation by the consulting firm Systain. The rating covers both the risks of Deutsche Bahn's direct suppliers and the risks of the entire upstream chain.¹ The risks are assessed based on the suppliers' sector in the specific supply chain stage and the country they are based in.

For this purpose, social risks are quantified with the indicator "risk hours". This indicator weights the working hours in the supply chain with regard to the risk that employment-related human rights are not being observed. In accordance with the ILO core labor standards, the following topics are considered: child labor, forced labor, pay, working time, freedom of unions/assembly, discrimination and occupational safety. Systain's risk assessment is based on the evaluation of statistical data on the above-mentioned topics from freely accessible sources from internationally recognized institutions such as the ILO, World Bank, UNICEF and the U.S. state departments.² The result of this data analysis is a risk assessment per supply chain stage (expressed as a percentage relating to one working hour). The working hours per supply chain level are calculated on the basis of statistical averages for the specific product category.

The above-mentioned risk hours are calculated by multiplying the working hours (in h) with the relevant risk assessment (as a percentage) for each supply chain stage. The results for each supply chain stage are then added up for the entire supply chain. The total risk hours (in h) calculated as a proportion of the total working hours (in h) of the supply chain under consideration result in the specific supply chain risk, expressed as a percentage. The specific risk is interpreted as the probability (as a percentage) that labor-related human rights are being violated in the supply chain. The following calculation shows the above-mentioned calculation methodology with fictitious numbers:

Fictitious example to explain the calculation methodology:

Assumption:

- Product with a supply chain that has 2 supply chain stages
- Tier 1 supplier = risk assessment: 30%; average working hours: 20 h
- Tier 2 supplier = risk assessment: 70%; average working hours: 15 h

Calculation:

- Working hours: $15\text{h} + 20\text{h} = \underline{35 \text{ working hours}}$ in the entire supply chain
- Risk hours: $20\text{h} * 30\% + 15\text{h} * 70\% = \underline{16.5 \text{ risk hours}}$ in the entire supply chain
- Specifically: $16.5\text{h} / 35\text{h} = \underline{47.1\%}$ (probability of labor-related human rights being violated in the supply chain)

¹ For further information on the above tool and the consulting company, please refer to the following link: <https://www.systain.com/estell/>

² Information is, among others, available at the following links: <https://www.ilo.org/global/statistics-and-databases/lang--en/index.htm>; <https://data.worldbank.org/>; <https://data.unicef.org/>



A >45% probability calculated for a specific DB supply chain that labor-related human rights are being violated in the supply chain is categorized as high and incorporated into the overall rating (cf. point 4) with 5 points.

4. Determination of DB risk group affiliation

The overall rating is based on the addition of the individual results of the risk criteria described in points 1 to 3. The following overview shows the classification of the overall result into risk groups:

Total score	Categorization	DB risk group
5 - 10	High risk	x
2 - 4	Medium risk	x
0 - 1	Low risk	-

Example calculation: A textile supplier from Bangladesh with calculated average risk working hours of 60% in the supply chain for its product category.

Sector risk 2 points + country risk 2 points + supply chain risk 5 points = 9 points

With 9 points, the supplier belongs to the DB AG risk group defined as "High risk".