Methodology

Production and trade data

For origin of production and trade flows, AidEnvironment has used <u>FAO 2020</u> global production data and <u>EU trade statistics 2021</u>. For each commodity, we selected the top-7 global producers. For the demonstration of trade flows for each commodity from both non-EU and EU countries into the EU market and the UK, we identified, based on Harmonised System (HS) trading codes*, key commodities and ingredients used in vega(n) products. For this, we have used the customs-based <u>Nomenclatuur</u>, the EU Deforestation Regulation <u>Annex</u>; and <u>Trade Map.</u> Moreover, we consulted two experts in the field of commodity trade recommended by IUCN NL.

For each commodity, AidEnvironment selected the top-5 non-EU and the top-5 EU suppliers to the EU (plus UK) market in the year 2021. Based on production and trading volumes, the top-3 supplying countries of each commodity to the Union were selected. This implies that we did not include as top-3 suppliers those European countries that do supply to the EU but that do not produce the commodity, considering that these are likely cases of re-imports. For each of the top-3 supplying countries, we have prepared pie charts with the top-5 recipient countries based on trading volumes. Occasionally, we selected supplying countries with lower trading volumes, but that were relevant to include due to specific sustainability findings, for instance, that such countries were particularly linked to considerable deforestation or human rights violations. Since UK trade data was not always recorded in the 2021 EU trade statistics, we have checked whether the UK was part of the top-5 recipients for each commodity in the trading year 2020. In the cases wherein the UK was part of this group of countries, we mentioned this in text on the factsheet.

Environmental and social risks

The environmental and social risks included in each factsheet were ranked from most to least prevalent, based on the literature research findings. Therefore, it can happen that, for instance, land use & deforestation is depicted as an environmental risk in the soy and palm oil factsheets, but not in the hazelnuts or almonds factsheets since deforestation is not a significant issue in the production and/or processing of these commodities. Conversely, child labour is found in hazelnuts production in Turkey, while it is not commonly associated with soybean production. In sum, each factsheet only presents potential risks linked to the commodity in question, in the order of high to low prevalence of the risk.

Environmental risks

For the environmental risk comparison sheet, we have compared 'hard' data on environmental risks for three variables – 'carbon footprint', 'water footprint' and 'deforestation risk' –, which were based on three key studies: Petersson et al. (2021) for carbon footprints; Mekonnen and Hoekstra (2010) for water footprints, and Pendrill et al., 2022 for deforestation risk. More information on how each study was used can be found on the website. Where possible, we have included insights on loss of native vegetation that are not classified as forest. Moreover, since the deforestation risk data is only valid until 2018, we have included recent updates on deforestation trends where possible.

To rank the environmental risk indicators, AidEnvironment has defined its own ranking scales and thresholds, based on 1) the average carbon and water footprints, and deforestation risk of the sample of 16 commodities; and 2) the ability to distinguish between relatively lower and higher values within the sample of 16 commodities. These ranking thresholds are to some extent arbitrary and subjective (e.g., what is considered relevant deforestation?). Thus, while it may be argued that the carbon footprints of the 16 commodities analysed can be considered low when compared to those of animal products, we have proposed a ranking that distinguishes between 'low' and 'relatively low' carbon footprints, to allow for comparison with other plant-based products within the sample of 16 commodities. Finally, we have added (if available) the footprints for a few animal protein products to give better insight into relative sizes and risks of the different types of products. The traffic light system used (from green to red) aims at making the comparison between products more intelligible and the risk areas easier to identify.

For the environmental risk categories 'Biodiversity Loss' and Contamination', there were no comparable hard data/indicators available. For instance, there is little to no comparable updated statistical data on pesticide use for the different crops produced globally. Therefore, exclamation marks (!) were used to highlight the fact that these aspects should be considered attention areas for vega(n) producers' due diligence. This is generally the case when the risk associated with these areas was ranked high (in first or second place) in the corresponding commodity factsheet

Social risks

Apart from specific research per commodity on labour conditions, child labour, land appropriation, gender issues, health and safety of workers, livelihoods and other relevant issues, general sources that were always consulted are the MVO Risk Checker and the Align tool. Not all commodities were covered under the MVO risk checker (e.g. quinoa). Whenever available, scientific sources were the preferred consultation resources.

Since comparing and ranking social risks in all commodities in the sample would be too subjective, we opted for a more context-based approach, highlighting the specific production countries that display high social risks associated with the commodity. In general, we included the countries that were linked to high attention areas in our factsheets (taking the first or second place in the risks ranked from most to least prevalent). If the social risk was common to the commodity in general and not specific to a producer country, we dubbed 'global' in the comparison table.

Important to note is that not being flagged as an attention area, does not mean the social risks are absent. It entails simply that such issues were not pervasive and therefore did not become apparent in the overall research. Many social risks are also very delicate, rather invisible, and difficult to measure objectively. Moreover, not all commodity risks and impacts are equally and/or systematically studied and reported.

*Note: this is a shortened version of the approach and methods section. For a detailed overview, including tables **with relevant HS codes per commodity** and an extensive **list of sources** used for each commodity, please visit the website.