



Health & Safety Management in Tanneries & its Communication in the Leather Supply Chain

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1. Introduction

This report represents the findings of the University of Northampton (UoN) in the context of research engaged in by The Confederation of National Associations of Tanners and Dressers of the European Community (COTANCE) and industriAll-Europe, carried out within the framework of an EU funded Social Dialogue project. The research seeks to explore the practices in reporting and communicating Health and Safety (H&S) risks along the leather value chain and how they are managed in tanneries. Although most responses originated in Europe, the research was also keen to acknowledge that leather is a 'Global Value Chain'; the research therefore reflects practices that span beyond European borders and the implications from the findings and recommendations made have global resonance for the leather value chain. The survey's target audience consisted of:

- Tanneries and Trade Unions
- Brands and Leather Buyers
- Tannery Suppliers
- Other Stakeholders (Non governmental organisations (NGOs), research centres, regulators, consultants and federations).

The aim of this research is therefore to provide a snapshot of the current situation within the leather value chain in relation to the perceived importance, reporting models, motivations and certification/auditing practices on H&S in own or outsourced tannery operations. Specifically, the research sought to answer the following three research questions:

1. How European tanneries are regulated and controlled with regard to key H&S requirements, and whether or how their own leather supply chain can be monitored?
2. How leather products manufacturers and importers set tannery workplace standards and monitor tannery workplace conditions in their supply chain?
3. How observers and other stakeholders observe and interact with the leather value chain?

The research project utilised a quantitative approach to the data gathering process involving the design, creation and dissemination of an online survey that UoN sent by email to pre-identified stakeholders in the sector belonging to the four stakeholder groups outlined above, as well as through wider industry networks and sources identified by the project partners, COTANCE and industriAll-Europe (see Section 3 for an overview of the methodological approach and survey design/content).

This report begins with a review exploring safety in the leather supply chain, so that the data presented in this report can be contextualised in relation to prior research and learning. An overview of the methodology and survey design is then presented in Section Three, before discussion of the results from the survey is presented. The report then ends with a summary of the key findings and recommendations for the sector as to how H&S frameworks can be better implemented in leather value chains.

2. Description of the survey respondents

From a total of 238 survey respondents, the response rate for each stakeholder groups were as follows:

- 47% Tanneries and Trade Unions
- 14% Tannery Suppliers (predominantly chemicals and working equipment)
- 13% Brands and Leather Buyers
- 26% Other Stakeholders (miscellaneous organisations following the leather sector including a varied spread of interests such as NGO's, leather associations and confederations, hide traders, consultants and designers etc.)

(i) Tanners and Trade Unions

The 113 respondents within this group are made up of tannery owners (45%), tannery workers (49%) and trade unionists (6%)¹. This category is considered to represent the viewpoint of the tanning industry: a group composed of 46% tannery owners, 47% tannery workers and 7% trade unionists.

The proportions of components within this group do not necessarily reflect the whole of the European sector: it would be wrong to categorise their responses as the voice of the European leather industry, but it can be said that the respondents of this category represent tanneries committed to shaping the image of the European leather industry.

The distribution of tanneries responding to the survey are as follows: 15% large enterprises, 39.8% medium sized and 45.1% of micro and small companies, which correspond broadly with the structure of the industry both in Europe and other countries outside Europe. About a third of the responding tanneries do not purchase leather from other tanneries, i.e. they are tanneries performing the full process from the raw hide or skin to finished leather.

(ii) Tannery Suppliers

For the 34 Tannery suppliers that responded, representing 14% of the total respondents, include companies providing services for the production of leather as either supply of chemicals (91%) or equipment (9%). It is clear that the survey response rate is dominated by chemical supplier, particularly from Spain (47.1%), Germany (17.6%) and Italy (11.8%). The size of 'tannery supplier' companies responding ranges from large (32%), micro (29%), small (21%), medium (18%).

Chemical supply companies are taking more of an influential role in the supply chain, by taking on roles such as consultancy and training, both up and down stream. They are also showing increasing concern over safe chemical handling and have been active in raising awareness through company training courses, collaboration with academia and supporting international initiatives via UNIDO.

(iii) Brands and Leather Buyers

The 30 respondents in this group (representing 13% of the total survey) also have a varied composition with 57% operating at global level, 47% at national level, 30% at supra-national level, and 20% at local level. 73% have their own production facilities and 53% outsource their production to free-lance manufacturers or sub-contractors. This has its importance because it implies shorter or longer supply chains, with the consequent fragmentation and traceability issues.

The respondents in this stakeholder group are dominated by those who produce or sell in the footwear sector (83%): 53% are active in the leather accessories sector (handbags, wallets, bags and satchels etc.) and 53%

¹ Both sides of the industry are put in the same stakeholder category for reasons of equality, having regard that the survey is being developed by the sector's EU Social Partners in the context of a joint Social Dialogue Project supported by the European Commission.

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of these, in the clothing sector (including belts and gloves). The upholstery sector was the least represented with 10% furniture and 3 % automotive. The group defines the marketplace for leather.

Respondents were given the opportunity to select more than one option for their sphere of activity, therefore the percentages do not refer to the total responses but to the number of the brands and leather buyers, which is 30. With regards to size, the companies defined themselves as large (53.3%), medium sized (13.3%) and small/micro (33.4%): they are located in Romania (26.7%), Spain (16.7%), France (13.3%) and the UK (10%). In addition, 23.3% of brands and leather buyers operate outside of the EU in this sample.

In 2015, the world's leather production was distributed as follows: 47% to shoes, 12% to leathergoods, 27% to furniture and car interiors and 14% to garments including gloves (UKLF, Oct 2017), which is consistent with the turnout of respondents to the survey in this stakeholder category. In terms of turnover, a sizeable share of the industry in the luxury and high-end sector is represented in this survey, but also a sizeable share of free-lance and sub-contracting companies, so in this regard, the views expressed on general questions are quite balanced.

(iv) Other Stakeholders

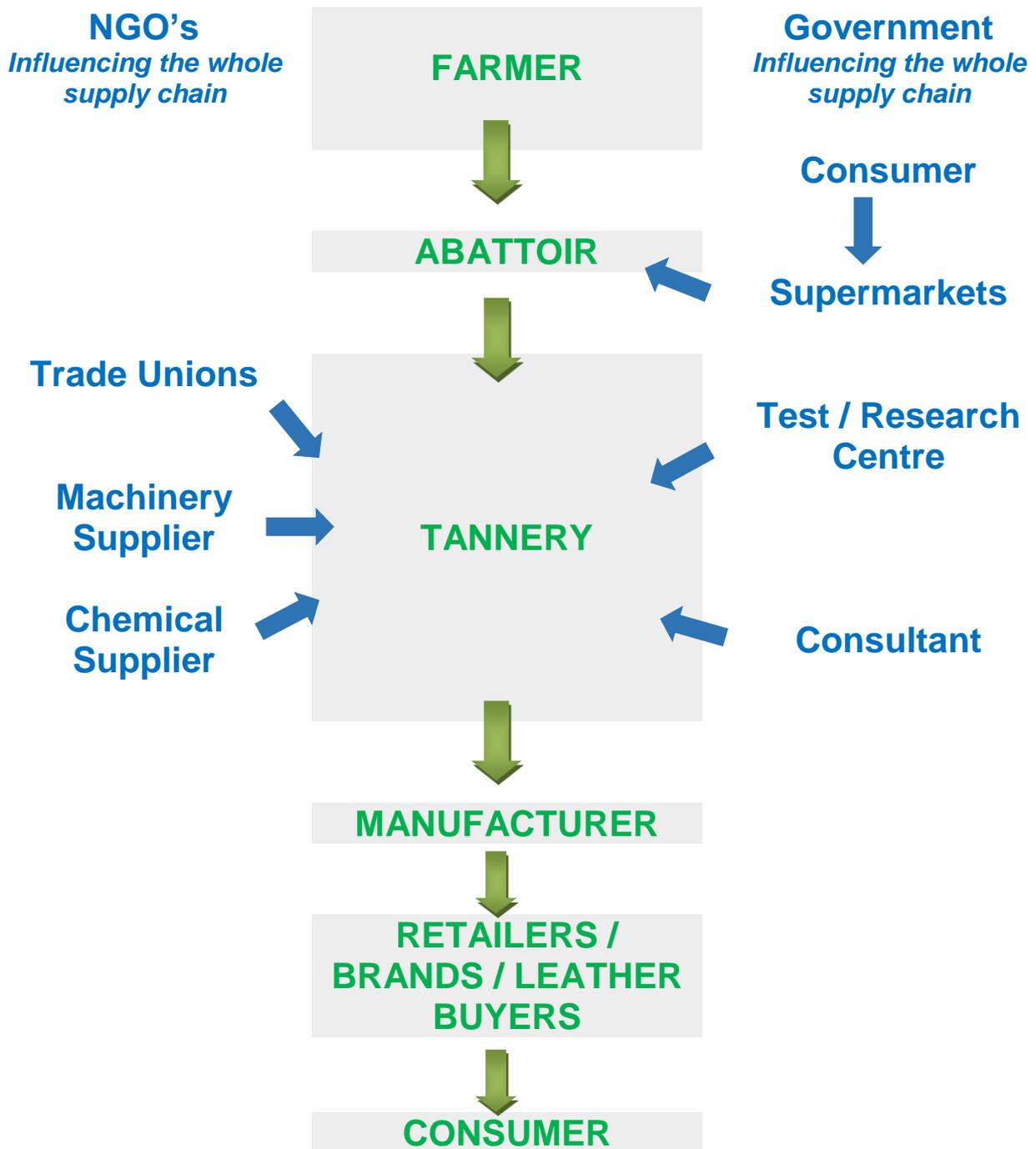
The final stakeholder group entitled represented 26% (n=61) of the total respondents with 20% classified as NGO's, 5% as consumers, 2% as Public Authority and 74% classified as 'other' (including trade institutes/associations/federations, research centres, consultants and designers etc.). These stakeholders represent bodies not readily classified by groups (i) to (iii), but do include the prime movers in technical, scientific and fashion development in the industry.

3. Current Situation of Health & Safety in the Leather Supply Chain

Corporate social responsibility (CSR) has become the focus of many companies and ensuring the safety of workers is an important part. The Textile and Leather sector in some developing countries offers some unpleasant images of workplace safety features and has become a target for negative media coverage. Since the Rana Plaza accident in Bangladesh where some thousand textile workers lost their lives or were permanently injured, bands outsourcing their production became aware of the reputational risk of a lack of due diligence. As a result, they started taking more interest in the practices of their suppliers. Textile and clothing factories and production sites for Footwear or Leathergoods as well as tanneries face greater scrutiny regarding CSR.

The leather supply chain can be complex; if the tannery is considered the central point of the leather supply chain, it has suppliers providing raw materials (in the form of hides/skins and chemicals) and customers including manufacturers and brands. A single piece of leather may have operations carried out in several tanneries, as part processed material is often traded between tanneries for further processing, meaning that one tannery can be a supplier to another. The finished leather may also have been cut and stitched by one factory and, assembled into a consumer product in another, all of which creates further complications in terms of monitoring traceability and compliance with due diligence parameters. A simplified leather supply chain is shown in Figure **3.1**.

Figure 3.1 - Leather Supply Chain



Among all these due diligence parameters, tannery workplace safety has become the object of particular attention of NGOs. Workers in tanneries are exposed to a range of risks and hazards, including heavy machinery, potentially harmful chemicals, noise and dust, making a higher risk environment than many other workplaces if proper care and protection is not applied. The breadth of hazards potentially faced in the tannery environment makes it a complex place to monitor and control.

Tanneries are covered by legal regulations governing H&S in the workplace, regulated by the country in which they operate. Legislation can be complex and often relates to general obligations not related to the specifics of the tanning industry. Within the European Union (EU), H&S is regulated by The European Agency for Health and Safety at Work (EU-OSHA). The Health and Safety at Work Directive (Directive 89/391 EEC) gives

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a framework for general H&S within Europe, but member states have to adopt these into their own laws. Where H&S information is available for tanneries, it is often not specific, for example, the Health and Safety Executive (HSE) in the United Kingdom has information regarding the footwear and leather sector but this is very general (HSE, 2018). Organisations such as the International Labour Organisation (ILO) provide occupational H&S guidance for the textile, clothing, leather and footwear sectors but the scope of is ranging and does not address direct tannery issues (International Labour Organisation, 2014).

For tanneries seeking guidance regarding H&S, there are initiatives which aim to address the main concerns. The United Nations Industrial Development Organisation (UNIDO), has a dedicated technical forum to provide information for leather and related industries (leatherpanel.org). UNIDO have guidelines for H&S in the tannery environment: Occupational Safety and Health Aspects of Leather Manufacture (UNIDO, 1999). This directly addresses some of the specific tannery concerns around raw material, working with machinery and the dangers of hydrogen sulphide (H₂S) gas. As hydrogen sulphide gas can cause deaths, UNIDO has produced an e-learning module aimed at tanneries to educate employees about the dangers (UNIDO Capacity Development, 2017).

An online interactive risk assessment tool (OiRA), for leather and tanning has been developed by COTANCE and FSE:THC (former name of industriAll-Europe) in the framework of (EU-OHSA) through the Social Dialogue Project to provide practical risk assessment for small and medium sized tanneries. The tool is owned by COTANCE and industriAll-Europe and is focused directly on tanneries, and therefore addresses directly the main H&S issues faced by tanners (OiRA, 2008). The tool is interactive and covers how an organisation manages H&S, along with guidance regarding the use of machinery, chemicals and general workplace environment. The tool offers guidance on correct procedures, as well as recommendations for an organisation to improve its H&S management. The tool also provides links to some of the relevant legislation on the topics covered, such as the provision of personal protective equipment and dealing with biological agents.

The leather sector press reports on fatalities and serious breaches of H&S within the industry. Deaths have been attributed to hydrogen sulphide gas: in April 2017 two worker were killed in the Kanpur region of India after cleaning a drainage channel (Ricker, 2017). In April 2018, three workers were killed in Tamil Nadu after climbing into a storage tank and were asphyxiated by the gas. The first worker was cleaning the tank, but the other two were killed when they went to his aid (La Conceria, 2018). Reports related to accidents from machinery are also reported in the leather media. In Ethiopia, tannery workers protested after a tannery worker lost a hand in a machinery accident. This report came after another employee lost both their hands in an accident at the same tannery (Gugsa, 2017). This indicates that while the conditions in tanneries are generally improving, bad practice can still be found.

In April 2013, the Rana Plaza building in Bangladesh containing many-garment factories collapsed, resulting in the deaths of 1135 workers and was reported worldwide. The incident highlighted the conditions under which workers in the garment and related sectors are forced to work and many well-known brands were implicated in the incident (Ryder, 2014). Following this, many brands investigated their supply chains in greater detail, as consumers were exposed to the realities of the conditions of low paid workers and the trend for 'social dumping' where lower wage areas are used. The European Parliament pledged to table a flagship initiative to ensure responsible management in the garment supply chain as a direct result of the Rana Plaza tragedy (European Parliament, 2017). The aim of the flagship initiative is to introduce mandatory due-diligence regarding supply chains in the industry, making companies more responsible for other members of their supply chain.

The Organisation for Economic Co-operation and Development (OECD) produced a due diligence document for responsible supply chain management in the garment and footwear sector, aiming to address the issues raised by Rana Plana. The guidelines form a comprehensive document and was the result of a multi-stakeholder process covering issues surrounding due diligence, such as labour issues, human rights and the environment (OECD, 2017). The development of the OECD guidelines and the EU flagship initiative indicate

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the concerns regarding CSR in the Apparel and Footwear supply chain and give assistance to how brands can begin to manage this.

While there is guidance on supply chain management, many brands still struggle to understand how to ensure compliance. With regards to tanneries, the brands they supply are often located in different countries and do not fully understand how the tanneries operate, with the focus being on the safety of downstream users (consumers) and less regard to upstream users (tannery employees). The general heading of CSR covers a broad range of aspects which have to be addressed separately. Following pressure from non-governmental organisations (NGOs), brands have looked at becoming more transparent within their leather supply chain around environmental issues and traceability.

Two initiatives to emerge surrounding CSR in the leather industry have been the leather working group (LWG) and Tannery of the Future (TOTF). The LWG developed an auditing protocol for tanneries which comprises environmental, traceability and some safety aspects within tanneries (Leather Working Group, 2017). H&S aspects of the protocol include emergency procedures, availability of first aid treatment and the presence of sulphide gas detectors. The LWG audit is an on-site tannery audit, carried out by a LWG trained auditor who will seek confirmation of compliance against the protocol. The limitation of the audit is that for smaller brands or tanneries, it can be an expensive process. In response and to support smaller tanneries, a TOTF tool was developed. Aiming to address many of the same issues, the TOTF protocol is a self-assessment tool (Tannery of the Future, 2017). While the LWG audit provides more security for a brand, the self-assessment tool provides some useful indications for smaller businesses looking to improve their CSR profile. While these tools give an indication of tannery practice, they are not H&S specific which highlights the need for tools such as OiRA, which is both tannery and H&S specific, and could provide support for SMEs.

4. Methodology

The research adopted a quantitative methodological approach to the data collection process, which involved the design and build of an online survey. The survey sought to provide data that would answer the overall research aim and the three specific research questions presented in the introduction. The survey was designed specifically for each of the four stakeholder groups (tanneries and trade unions; brands and leather buyers; tannery suppliers; and other stakeholders) so as to ensure that the questions were context specific. However, there were a high number of questions that were the same across the surveys, so as to ensure that the research could also engage in comparative analysis between groups. The surveys were designed in English, before being translated by the partners into six other language versions (German, Spanish, French, Italian, Portuguese and Romanian). Each of the survey language versions contained all four of the stakeholder group sub-surveys. The links to the seven survey languages were sent out to a pre-identified database of stakeholders (n=698) in an email containing details regarding the project and the seven survey links. This database was collated by the Institute for Creative Leather Technologies (ICLT) at the UoN. The survey was live between October 2017 and February 2018 and reminders were sent out by email every 2 weeks to those organisations that had not yet responded. (Figure 4.1 provides an overview of the survey structure).

In addition to this, the survey links were also distributed to stakeholder networks through industry links and membership databases, secondary emails from partners and word of mouth. This makes it difficult to ascertain an exact response rate for the survey, as the total number of organisations engaged cannot be identified due to the fluid nature of the dissemination and the multiple networks engaged. The survey can therefore be seen as adopting two sampling techniques; first, a stratified sample of targeted stakeholders, and second, a snowball sample of stakeholders affiliated to partners or respondents.

However, it is possible to use existing data sources to make estimates of the size of the leather industry in Europe, that would allow us to calculate a quasi-response rate. Indeed, data from the European Integrated Pollution Prevention Control Bureau (EIPPCB, 2013) shows that in 2007 there were 1,881 leather manufacturing companies operating in the European leather industry, employing 28,219 individuals, and with a combined turnover of €7.483 billion. Taken as an average this means that the average European leather industry company would employ 15 people (classified in this report as a small company); with a turnover of €3.98 million per annum. Given the response data identified in the paragraph below, this would give a response rate in Europe for the leather industry as a whole of 11.7%, based upon 93% (221) of the 238 respondents being European based and a total of 1,881 companies in Europe ($221/1,881 = 11.7\%$). Table 4.1 below provides an overview of the European leather value chain in relation to organisation numbers and turnover, and is split by stakeholder group in relation to the survey sample (data only held at a European level for Tanneries and Trade Unions and Brands and Leather Buyers. This data reveals that the average turnover per employee for tanneries in Europe is nearly €221,000, compared with a survey sample value of just over €203,000. For Brands and Leather Buyers, this was nearly €66,000 across Europe compared within the survey sample with just over €201,000 per employee. This suggests that the dataset is relatively representative in relation to tanneries, but that the survey has tended to only capture responses from the larger Brands and Leather Buyers.

Table 4.1 – Stakeholder Breakdown by Sample/Europe

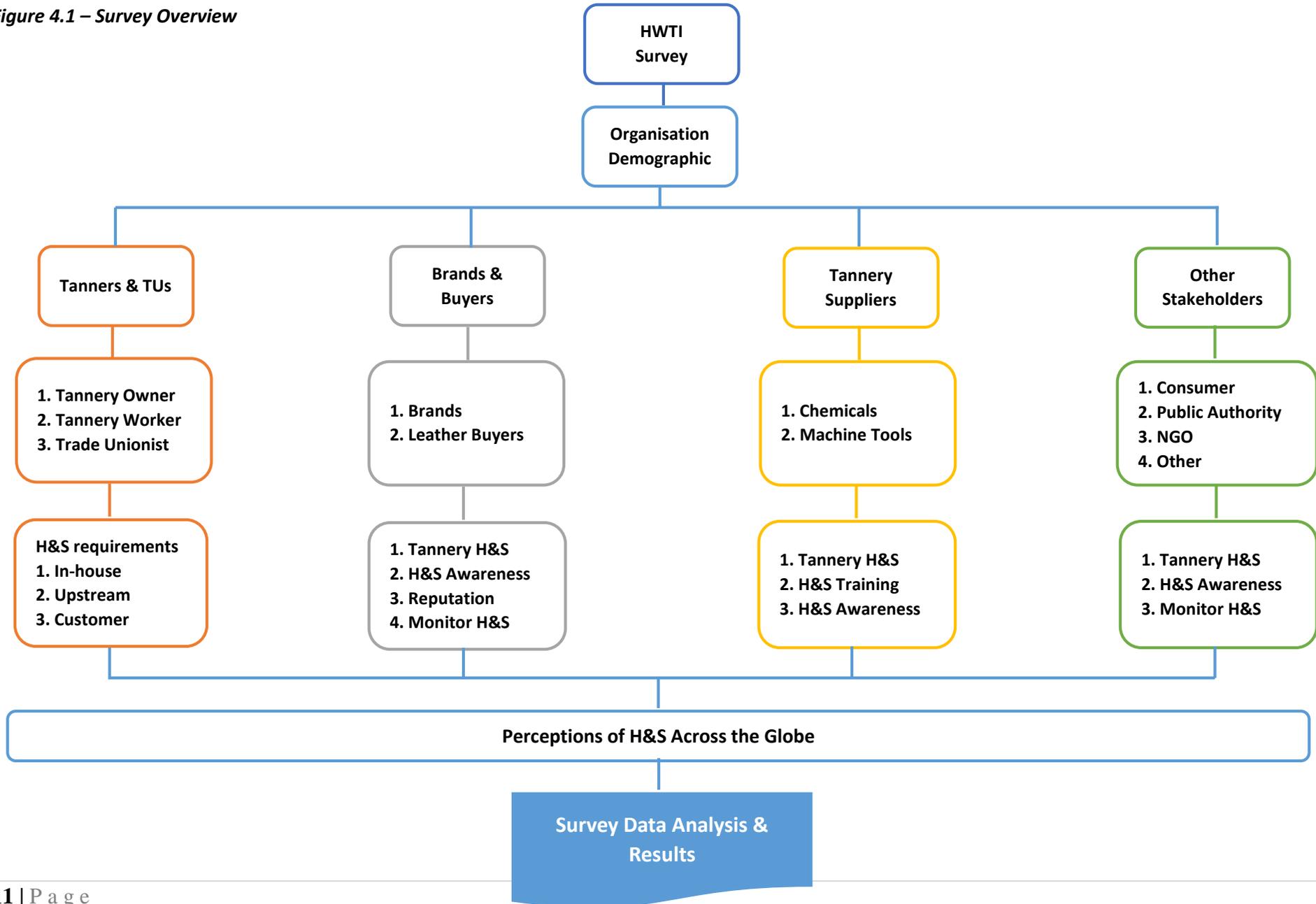
Stakeholder Type	Survey Sample			Europe		
	N / %	Turnover	Employment N / %	N / %	Turnover	Employment N / %
Tanneries	113 / 79%	€2.4b	12,015 / 71.7%	1,693 / 7%	€7.8b	35,304 / 9%
Brands & Leather Buyers	30 / 21%	€955m	4,750 / 28.3%	22,492 / 93%	€23.4b	356,960 / 91%
Total	143 / 100%	€3.4b	16,765 / 100%	24,185 / 100%	€31.2b	392,264 / 100%

Nb. Data for the different sectors in Europe obtained from Eurostat (2011). Turnover and staffing data for the participant sample are estimates as respondents only selected broad categories for staffing and turnover. Therefore, the middle value for each category is used here to calculate averages and totals.

In total, 238 participants responded to the survey, giving an estimated response rate (based upon the primary database engaged) of 34.1%. The respondents were engaged from 27 different countries globally, although 92.9% (n=221) of the respondents were from Europe. Section 4.1 of the results provides a breakdown of the survey respondent demographics. However, participants did engage from across the globe including: North America (n=5); South America (n=1); Asia (n=6); Middle East (n=1); Oceania (n=2); and Africa (n=2). The data can therefore be viewed as global in scope, albeit with a strong focus towards the European leather sector. Indeed, the engagement of nearly a quarter of the sample from outside of Europe demonstrates the prime role that the European leather sector has globally and the interest around the world in the European leather sector and its approach to H&S standards. Therefore, this European bias to the sample should not be viewed negatively, but rather as a representative factor of the global leather value chain and the role that Europe can play in improving H&S standards in other regions.

All data was analysed in Statistics Package for the Social Sciences (SPSS) version 22.0 or Stata. Both are statistical analysis software packages that allow detailed examinations of datasets, over and above mere comparisons of averages. The analysis included descriptive tests (means and median average values), and comparative analysis using cross-tabulation Pearson Chi-squared tests. The latter Chi-squared tests allows for a comparison of two or more categorical datasets to see if the observed differences between them arose by chance or not (e.g. differences in yes/no responses amongst the different stakeholder groups). This allows the research to state whether there are indeed significant differences between different stakeholder responses or not.

Figure 4.1 – Survey Overview



5. Results

5.1 – Descriptive analysis of the data:

The survey was distributed in seven different languages, and

Figure 5.1 below shows the response rates for each of these seven languages as a percentage of the overall total.

Figure 5.1: The responses rate by languages (n = 238 / 100%).

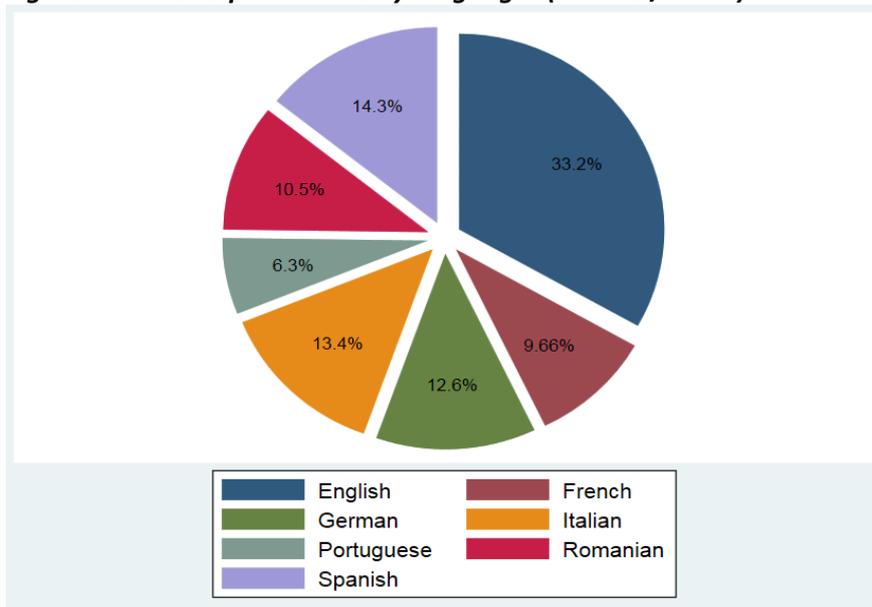


Figure 5.1 shows that the majority of the survey responses were completed in English (33%; n=79), followed by Spanish (14%; n=34), Italian (13%; n=32), German (13%; n=30), Romanian (10%; n=25), French (9%; n=23), and Portuguese (6%; n=15). As was noted earlier, the survey was international in scope, capturing responses from stakeholders in 27 different countries, but with a strong European bias (93%).

A specific breakdown of the countries that the responses emerged from is contained in Table 5.1 below.

Table 5.1: Country specific sample breakdown

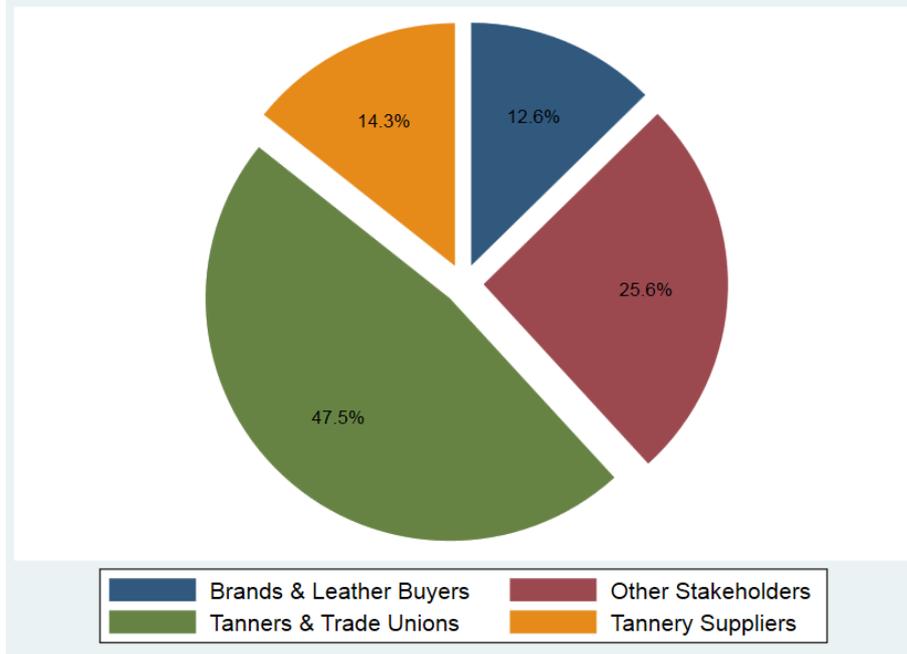
Country	Sample	
	N	%
Spain	41	17.2
Italy	37	15.5
Germany	27	11.3
France	26	10.9
UK	24	10.1
Romania	24	10.1
Portugal	16	6.7
Austria	10	4.2
USA	5	2.2
Sweden	5	2.2
Netherlands	4	1.8
India	3	1.4
Bangladesh	2	.8
Australia	1	.4
Finland	1	.4
Czech Republic	1	.4
Belgium	1	.4
South Africa	1	.4
Thailand	1	.4
Kenya	1	.4
Brazil	1	.4
Greece	1	.4
Turkey	1	.4
Switzerland	1	.4
Moldova	1	.4
Denmark	1	.4
New Zealand	1	.4
Total	238	100

Table 5.1 demonstrates that the largest responses to the survey emanated from Spain and Italy, whilst the US was the largest country respondent outside of the EU (the EU accounted for 93% of the responses).

The survey also captured the responses from four stakeholder groups (tanneries and trade unions; brands and leather buyers; tannery suppliers; and other stakeholders). Figure 5.2 below illustrates the distribution of the responses according to these four groups.

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Figure 5.2: Response rate according to the four stakeholder groups (n = 238 / 100%).



The results demonstrate that tanners and trade unions provided most of the responses (47%), followed by other stakeholder (26%), tannery suppliers (14%), and brands and leather buyers (13%). In breaking down each stakeholder group into sub-groups the following data emerged:

- **Tanners & Trade Unions:** The 'tanners and trade unions' category is in turn, divided into tannery owners (46%), tannery workers (47%), and trade unionists (7%).
- **Brands & Leather Buyers:** Among the 30 brands and leather buyers: 83% produce or sell footwear, 53% clothing (including belts and gloves), 53% leather accessories (handbags, wallets, bags & satchels, etc.), 10% furniture, and 3% automotive².
 - With respect to the brand, of the 30 brands & leather buyers 57% have a global brand, 47% a national brand, 30% a supra-national (i.e. EU), and/or 20% a local brand.
 - The last specification investigated refers to the business sector, in particular 73% of the 30 brands and leather buyers manage their own production and 53% outsource their own production.
- **Tannery Suppliers:** The majority of tannery suppliers (91.4%) were chemical suppliers, with other responses also coming from machinery suppliers (8.6%).
- **Other stakeholders:** These included responses from NGOs, research centres, consultants and federations. The other stakeholder groups include 'other' 73.8%, consumers 4.9%, NGO 19.7%, and Public authority 1.6%.

The survey data was also analysed in relation to each of the main European respondent countries (a total of eight countries had enough respondents for analysis – n ≥ 10) against stakeholder type. Table 5.2 below outlines this.

² All these information (market destination, the sources of production, and the type of brand) were collected in the survey by giving the possibility to the respondents to select more than one option, therefore the percentages presented here do not refer to the total responses but to the number of the brands and leather buyers, which is 30.

Table 5.2: Stakeholder Type by Country

Country	Tanners & Trade Unions	Brands & Leather Buyers	Tannery Suppliers	Other Stakeholders
UK	7.1%	12.9%	5.9%	16.7%
Germany	11.5%	3.2%	17.6%	11.7%
Spain	11.5%	16.1%	47.1%	11.7%
France	17.7%	12.9%	0.0%	3.3%
Italy	20.4%	6.5%	11.8%	13.3%
Portugal	12.4%	0.0%	2.9%	1.7%
Romania	4.4%	29.0%	2.9%	15.0%
Austria	4.4%	6.5%	0.0%	5.0%
Other Countries	10.6%	12.9%	11.8%	21.6%
Total	100.0%	100.0%	100.0%	100.0%

The data reveals that the majority of the Tannery and Trade Union sample (nearly three-quarters) were based in Italy, France, Portugal, Germany and Spain, with France and Italy accounting for over one-third of the sample alone. In relation to the category “Brands and Leather Buyers”, Romania was the largest respondent country, with Spain, France and the UK also providing a significant number of responses. For the Romanian context, this equated to the following breakdown³:

- Stakeholder sub-type:
 - Footwear = 80.00%
 - Leather Accessories (Handbags, Wallets, Bags & Satchels, etc.) = 20.00%
- Geographic Reach:
 - Local = 30.00%
 - National = 50.00%
 - Supra-national (i.e. EU) = 20.00%
- Production:
 - Own Production = 87.5%
 - Outsourced Production, Traders & Retailers = 12.5%

The data also reveals some striking results, including:

- Brands Leather Buyers respondent numbers from Germany were particularly low, suggesting that either the survey did not penetrate this market or that Germany has a low number of Brands and Leather Buyers despite being the largest consumer market in Europe.
- Nearly half of all Tannery Suppliers responding to the survey emanated from Spain, suggesting large chemical (and to a lesser degree machinery) sectors operating in the country.
- Romania’s large manufacturing base demonstrates how the manufacturing sector in the leather value chain has moved to lower cost European countries like Romania.
- Nearly half of all the Tannery Supplier respondents were based in Spain, with Germany and Italy also accounting for nearly one-third of respondents.
- There was a more even spread for the ‘Other Stakeholder’ type (NGOs, research centres, consultants and federations), with over one-fifth of responses in this category emanating from outside of Europe.
 - The 12 NGOs are mainly from ‘Different origin’ with respect to the seven board country (58%). With respect to the original seven countries, most NGOs come from Italy (17%), and then Germany, Romania, and United Kingdom (all around 8%).

While data does exist regarding some exact details of how the European industry is structured, much of this data (held at Eurostat level) is often granular and does not breakdown the sector in the same way that we

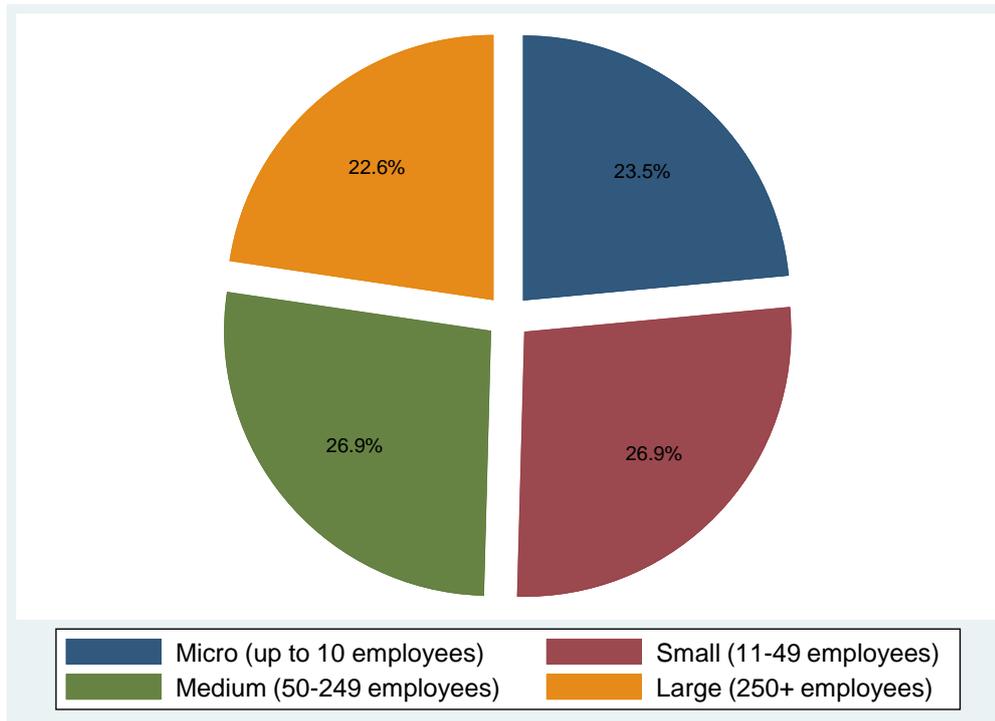
³ This data should be treated with caution as the sample-sizes involved are very small (n < 10).

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have done in approaching the leather value chain in this research. The data generally follows observations from the authors' experience of the industry; however, there are some differences. Italy is the biggest employer in the tannery sector within Europe and also has many manufacturers and brands, so a larger percentage of responses could be expected from Italian industry. Portugal has a strong footwear industry, so it is somewhat surprising that none of the respondents were from the brands and leather buyers' category. Romania has a strong response rate, particularly in regard to brands and leather buyers, this could relate to a strengthened product manufacturing sector in recent years.

Further analysis was also undertaken on the size of the respondent organisations and the results are shown below in Figure 5.3.

Figure 5.3: Response rate according to the organisational sizes (n = 238 / 100%).



Small and Medium Enterprises (SMEs), defined as having ≤ 250 employees, have been sub-divided into micro, small and medium categories. Organisations with >250 employees are not classed as an SME and are referred to as large. As shown in Fig. 5.3, the responses are evenly spread according to organisational size. With the most frequent being the medium and small categories, which between them account for over half of the respondents. Micro and larger organisations provided respectively 23.5% and 22.6% of the responses. Interestingly, if this is compared against stakeholder type, then we see that the majority of respondents in the category "tannery and trade union" were SME sized (11-249 employees) (73.8%), as opposed to brands and leather buyers where the majority (53.3%) were larger organisations (250+ employees) organisations. This is in line with the capital-intensive nature of tanning, and the labour intensive nature of leather manufacturing, and comparisons of stakeholder type and size are made below in more detail. When compared with data from the sector as a whole, this is broadly aligned with the average tannery size being in the small enterprise category (15 employees) (EIPPCB, 2013); whilst the same figure is also found for the manufacturers of footwear products (15 employees average) (ECFI, 2016). Therefore, the responses from tanneries and trade unions seem to be broadly aligned with the EU average in relation to size; whilst Brands and Leather Buyer respondents in this survey are both larger than the European average by turnover, but smaller by staffing (as was noted in Section 3 of this report). This suggests that this survey has captured data from larger manufacturers with more automated production facilities.

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For tannery suppliers there was a more even spread, with the company's ranging from large (32%), micro (29%), small (21%), and medium (18%) in size. The majority of other stakeholder respondents (NGOs, research centres, consultants and federations) identified as micro-enterprises or small in size, with these two categories accounting for 77.2% of the sample. Analysis of these differences in organisational size across stakeholder groups was statistically significant⁴ (Pearson chi-square test - $p < .001$). In addition to this cross-comparison of stakeholder types and organisational size, an analysis was also undertaken in relation to organisational size and country of origin⁵. Table 5.3 below outlines this data.

Table 5.3: Organisational Size by Country

Country	N	Micro (up to 10 employees)	Small (11-49 employees)	Medium (50-249 employees)	Large (250+ employees)
UK	24	25.0%	25.0%	20.0%	30.0%
Germany	27	19.0%	28.6%	28.6%	23.8%
Spain	41	25.0%	29.2%	33.3%	12.5%
France	26	23.1%	34.6%	19.2%	23.1%
Italy	37	20.6%	26.5%	35.3%	17.6%
Portugal	16	6.7%	33.3%	53.3%	6.7%
Romania	24	34.8%	30.4%	21.7%	13.1%
Austria	10	0.0%	30.0%	20.0%	50.0%

The data reveals that when explored in relation to country of origin, there are differences in organisational size structures across countries. Most notably the Austrian context was characterised by medium and large organisations (70%), whilst at the other end of the scale Romania only had 34.8% of such companies (but a predominance of micro and small organisations). Unsurprisingly across the eight countries listed, SMEs predominated accounting for 56.7% on average, but with higher proportions existing in: Portugal (86.6%); Spain (62.5%); Italy (61.8%); and Germany (57.2%).

5.2 – Comparative analysis of the data:

The questionnaires are composed of both common questions for all stakeholders to respond to, as well as stakeholder specific questions, in order that the research can both investigate topics related specifically to each group and to make comparisons across groups. In this section, the results of the analysis of these common questions will be presented. The section has been structured in relation to the three research questions outlined earlier in the report, and reiterated here below. The research team coded all comparative common questions to the research question(s) that they provided answers to, in order to structure the analysis thematically. In summary, the research questions are shown below:

- 1) how European tanneries are regulated and controlled with regard to key H&S requirements, and whether or how their own leather supply chain can be monitored?
- 2) how leather products manufacturers and importers set tannery workplace standards and monitor tannery workplace conditions in their supply chain?
- 3) how observers and other stakeholders observe and interact with the leather value chain?

⁴ Statistical significance (p) relates to the probability that a trend identified in the data is merely a chance occurrence and not actually a population-wide phenomenon. In this research the value set to for statistical significance is .05, which denotes that for us to report a finding as significant there is a less than 5% chance that the result is a random chance effect in the data.

⁵ The survey data was also analysed in relation to each of the main European respondent countries (a total of eight countries had enough respondents for analysis – $n \geq 10$) against organisational size.

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5.2.1 – Health & Safety practices in tanneries, monitoring & control:

This section will explore the data in relation to the first research question, related to how tanners manage and control key H&S practices, and whether or how their own leather supply chain can be monitored?

Figure 5.4 shows the potential for the OiRA tool. In particular, it assesses if stakeholders have considered the free OiRA tool in the identification of tannery workplace risks and for tanners and their customers whether they produce their Risk Assessment Report (RAR) for tannery operations on the basis of the OiRA tool.

Figure 5.4: The use of the Online Interactive Risk-Assessment (%).



Figure 5.4 shows that the majority of stakeholders have not considered the free OiRA tool in the identification of tannery workplace risks and tanners and their customers do not use this instrument for setting up their company RAR (for the former) or the H&S requirements to suppliers (for the latter). The distribution of the answers is similar among the four groups, from tanneries and trade unions (83%) to brands & leather buyers (93%). Indeed, the Pearson chi-square test shows us that the differences between groups are not significant. This result evidences the low awareness of the OiRA tool in the leather value chain, although this has to be viewed alongside other data in this report that demonstrates a low awareness of H&S RAR frameworks in general (this is not an OiRA specific phenomenon). This is a trend that is also further evidenced later in the report (see Figure 5.10), which shows that only 6% of all respondents are aware of the tool, and within this only 10% of responding Tanneries and Trade Unions.

Furthermore, regression estimations⁶ were used to explore the use of OiRA by stakeholders (the results of the regressions are presented in the appendices - see Table A). This analysis reveals that:

- The estimations for the 'use of the Online Interactive Risk-Assessment' (see Column 1 in Appendix A) shows that the type of stakeholder are not significantly related to the use of OiRA, as well as the country of origin. However, with respect to the dimension of the organization, the results show that 'large' and 'medium' enterprises are less likely to use the OiRA tool. Therefore, OiRA use and

⁶ In particular, we regressed all the above information with respect to the type of stakeholder, the organisational size, and the country of origin, through regression estimations. In case the coefficients were significant, with a p-value lower than the chosen critical value 0.05, we reported the results of the regressions. The results are interpreted with respect to the first category of each variable, the one with the coefficient equal to zero.

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awareness is more prevalent in smaller organisations. Indeed, this small- and micro-enterprise part of the sector is what OiRA was created for, and so this demonstrates that it does at least seem to be reaching its target audience.

Moreover, as shown in Figures 5.5a/b below, the majority of respondents also did not know whether it was suitable or not, specifically in relation to whether they believed that the OiRA tannery tool addresses all key risks in the leather production process.

Figure 5.5a: Suitability of the OiRA tannery tool among the four group of respondents.

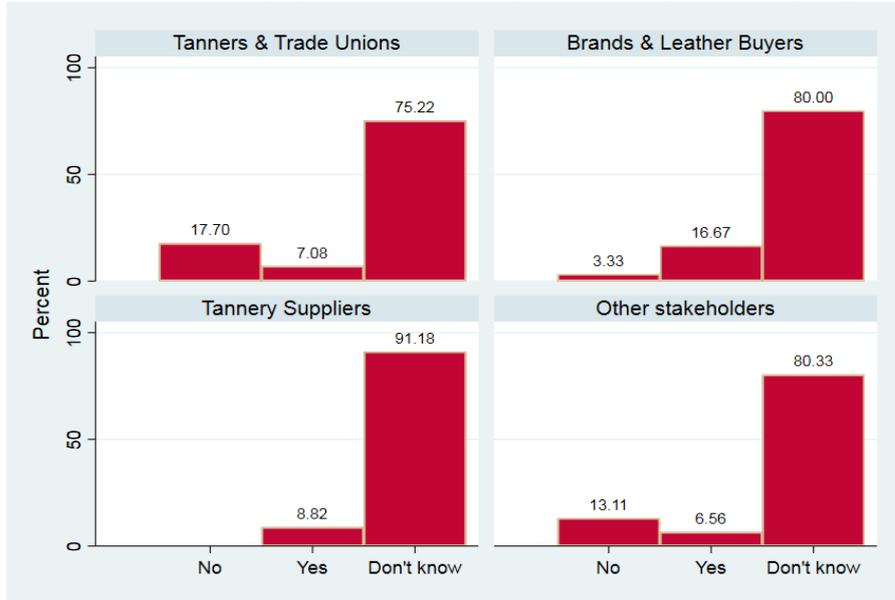


Figure 5.5b: Suitability of the OiRA tannery tool among the four group of respondents for those that are aware of the tool.



Table 5.4: Suitability of the OiRA tannery tool among the four group of respondents for those that are aware of the tool.⁷

Response	Tanners & Trade Unions	Brands & Leather Buyers	Tannery Suppliers	Other Stakeholders	Total
No	15.79	0.00	0.00	22.22	15.15 (n=5)
Yes	36.84	100.00	66.67	22.22	39.39 (n=13)
Don't know	47.37	0.00	33.33	55.56	45.45 (n=15)
Total	100.00 (n=19)	100.00 (n=2)	100.00 (n=3)	100.00 (n=9)	100.00 (n=33)

Figure 5.5a illustrates that most of the stakeholders do not know if the OiRA tannery tool addresses all key risks in the leather production process. For those that were aware of the OiRA tool, Figure 5.5b and Table 5.4 show that perceptions of the suitability of OiRA were broadly positive, with (all/majority) of Brands and Leather Buyers and Tannery Suppliers seeing it as suitable, whilst only a third or less of tanneries and other stakeholders agreed. This demonstrates that OiRA is gaining market traction and that where stakeholders are aware of it they broadly see it as fit for purpose (i.e. only 5 of the 33 respondents that were aware of OiRA did not think it was suitable). The Pearson chi-square test shows us that the differences displayed in the above graph are significant ($p < 0.05$), with Tanneries and Trade Unions, as well as Other Stakeholders, being more likely to view OiRA as unsuitable when compared with Tannery Suppliers and Brands and Leather Buyers. Furthermore, for those stakeholders that were aware enough to make a judgement, more stated that it did not address **all risks** in the leather production process compared with those who felt that it did [12.2% No (n=29); 8.4% Yes (n=20)]. If turned into a ratio of just those that responded then this equates to 59.2% of those aware of OiRA stating that it does not address all risks, compared with 40.8% who believe that it did. However, this question does focus on **all risks** and so this should not be seen as a direct criticism of the tool itself. Indeed, the sample-sizes are quite small for the evaluation of OiRA and so caution must be exercised when considering these findings.

The survey also addressed the question to all stakeholder categories on their practice regarding the person responsible for monitoring the implementation of the H&S RAR in tannery workspaces (see Figure 5.6 below)⁸.

Table 5.5: Person in responsible for monitoring the implementation of the H&S RAR in workspaces for all stakeholders group (%).

Response	Brands & Leather Buyers	Other Stakeholders	Tanners & Trade Unions	Tannery Suppliers	Total
General Manager	38.46	23.19	31.69	21.67	28.10
Dedicated Personnel	46.15	29.71	40.98	48.33	38.81
Workers Representative	12.82	20.29	14.75	13.33	16.19
Governmental Inspector	0.00	10.87	4.37	13.33	7.38
External Trade Union Expert	0.00	10.14	1.09	1.67	4.05
Other	2.56	5.80	7.10	1.67	5.48
Grand Total	100.00 N= 39	100.00 N= 138	100.00 N= 183	100.00 N=60	100.00 N= 420

⁷ Both Figure 5.5b and Table 5.4 present the responses of the suitability of the OiRA tannery tool among the four group of stakeholders, but only for those that are aware of the OiRA tool. However, this breakdown reduces the sample size with respect to the original Figure 5.5a, in fact we are considering only 33 responses (14%) and not considering 204 responses (86%).

⁸ The specific question asked here was 'Who is in charge for monitoring the implementation of the H&S RAR?'. This related to the individual/job role within the company who had primary responsibility for the RAR implementation.

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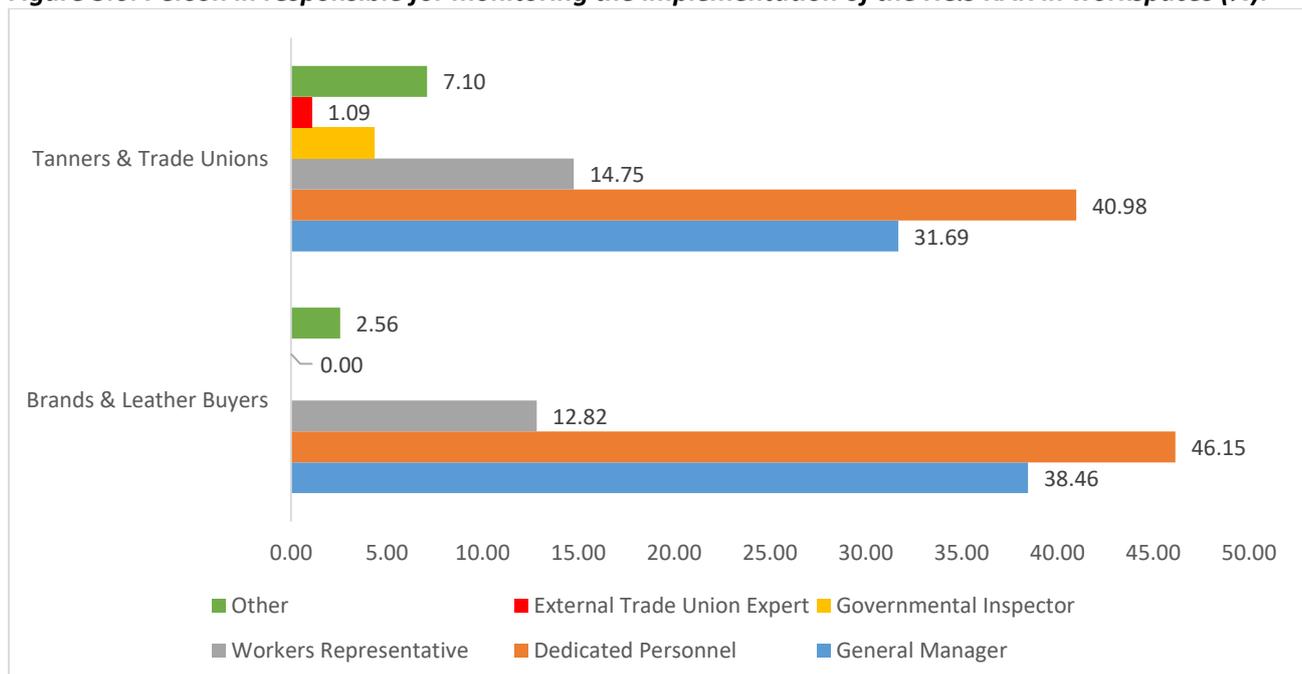
Looking closer at the most relevant stakeholder categories in the leather supply chain: dedicated personnel across both stakeholder groups (46% of the Brands and Leather Buyers and 41% of the tanners and trade unions). For both groups, the other personnel identified as being in charge for monitoring the implementation of the H&S RAR are the general manager, followed by worker representatives, and other personnel. However, the percentage of the Tanners and Trade Unions identifying the general manager as being responsible is lower with respect to the Brands and Leather Buyers respectively (32% versus 38%). The converse is true for the data in relation to worker representatives and other personnel, for which more Brands and Leather Buyers rely on them with respect to Tanners and Trade Unions.

Table 5.6: Person in responsible for monitoring the implementation of the H&S RAR in workspaces for Brands and Leather Buyers (%).

Response	Large (250+ employees)	Medium (50-249 employees)	Micro (up to 10 employees)	Small (11-49 employees)	Grand Total
General Manager	60.00	13.33	26.67	0.00	100.00
Dedicated Personnel	61.11	16.67	5.56	16.67	100.00
Workers Representative	0.00	20.00	40.00	40.00	100.00
Governmental Inspector	0.00	0.00	0.00	0.00	0.00
External Trade Union Expert	0.00	0.00	0.00	0.00	0.00
Other	100.00	0.00	0.00	0.00	100.00
Total	53.85	15.38	17.95	12.82	100.00

In particular, for tanners and trade unions the general manager is in charge for monitoring the implementation of the H&S RAR in 32% of the cases, in particular for medium enterprise (34%), followed by small enterprise (31%), large enterprise (19%), and micro enterprise (16%). With respect to Brands and Leather Buyers, the person considered to be responsible is the dedicated personnel category (46%), in particular for large enterprises (61%), followed by small and medium enterprise (both 17%), and micro enterprise (6%).

Figure 5.6: Person in responsible for monitoring the implementation of the H&S RAR in workspaces (%).



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Moreover, the survey investigated whether the respondents considered a company H&S RAR as a useful tool for testifying how workplace safety is managed (see Figure 5.7).

Figure 5.7: Usefulness of the H&S RAR, for each stakeholder group (%).



As Figure 5.7 shows, for all stakeholder groups in general a H&S RAR is viewed as a useful tool for testifying how workplace safety is managed in a tannery. However, there are some differences between groups, that are most likely related to their position in the leather value chain. In particular, by comparing the 'other stakeholder' group with the other three stakeholder groups (tanners and trade unions; tannery suppliers; brands and leather buyers), the number of respondents without an opinion is relatively large (39%). The 'other stakeholder' group is composed of NGOs, research centres, and consultants, who are not necessarily acquainted with H&S RAR. Still 56% agree however, about the usefulness of the H&S RAR. All other groups show a much higher trust rate, with four-fifths of tanners and trade unions and tannery suppliers answering yes, and nearly 97% of brands and leather buyers answering in the affirmative. Cross-tabulation analysis revealed these differences to be statistically significant ($p < 0.05$). The 'other stakeholder' group is the least likely group to be directly impacted by tannery H&S RAR, as while they influence the leather supply chain, in the majority they sit outside of it. This could relate to the uncertainty observed regarding their use by this group. As downstream users of leather, brands and leather buyers need assurance from tanneries regarding all CSR and this indicates that a H&S RAR could provide this assurance for them.

Finally, stakeholder perceptions of the level of enforcement of H&S standards in several geographical regions around the world (EU, non-EU Europe, Russia and former Soviet Republics, Asia, Latin America, Africa, Oceania, and North America) was explored⁹. Figure 5.8 below outlines the responses received.

⁹ It should be noted that these only relate to stakeholder perceptions and so may not correspond to the realities on the ground. Furthermore, the respondent bias to Europe as a region (92% of all responses received) intrinsically makes these results a European-centric perception.

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Figures 5.8a-h: Perception of the level of enforcement of H&S standards in several geographical areas for each stakeholder group (%).

Figure 5.8a – Trust in the EU Countries

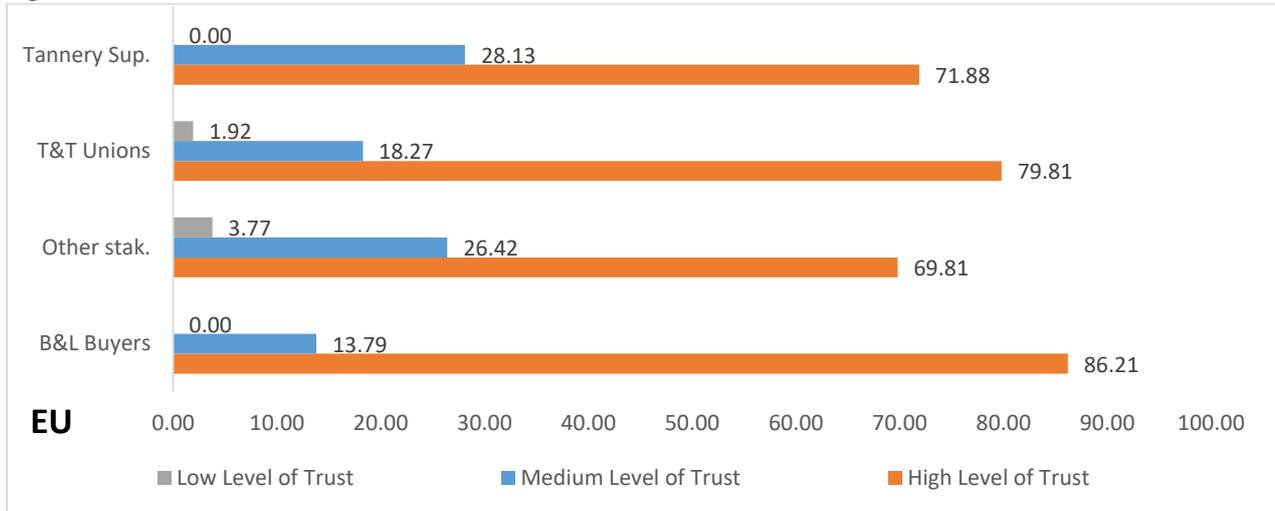


Figure 5.8b – Trust in the Non-EU Countries

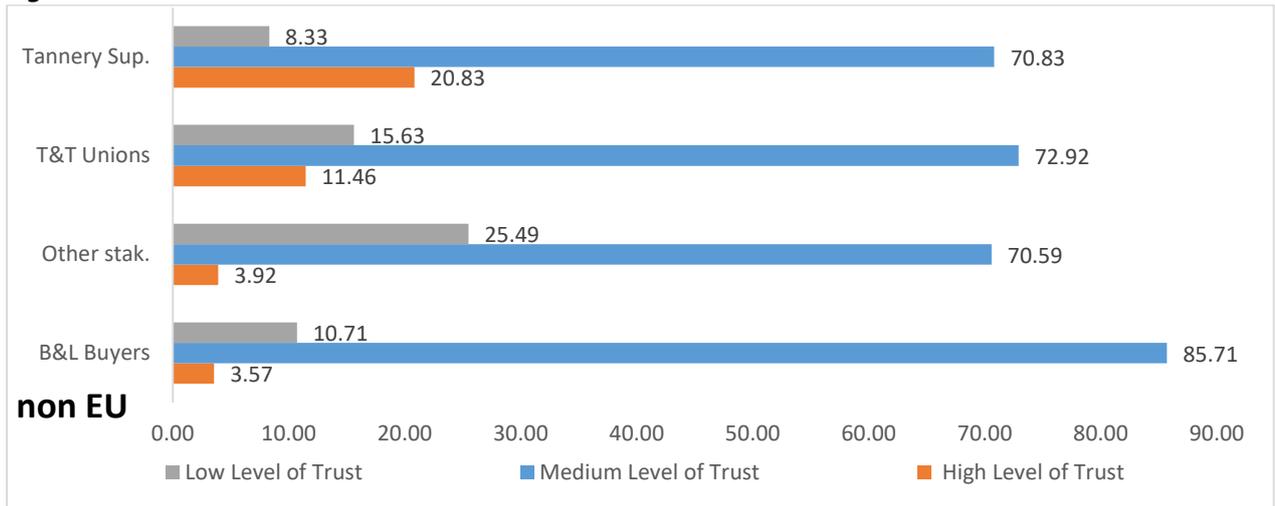
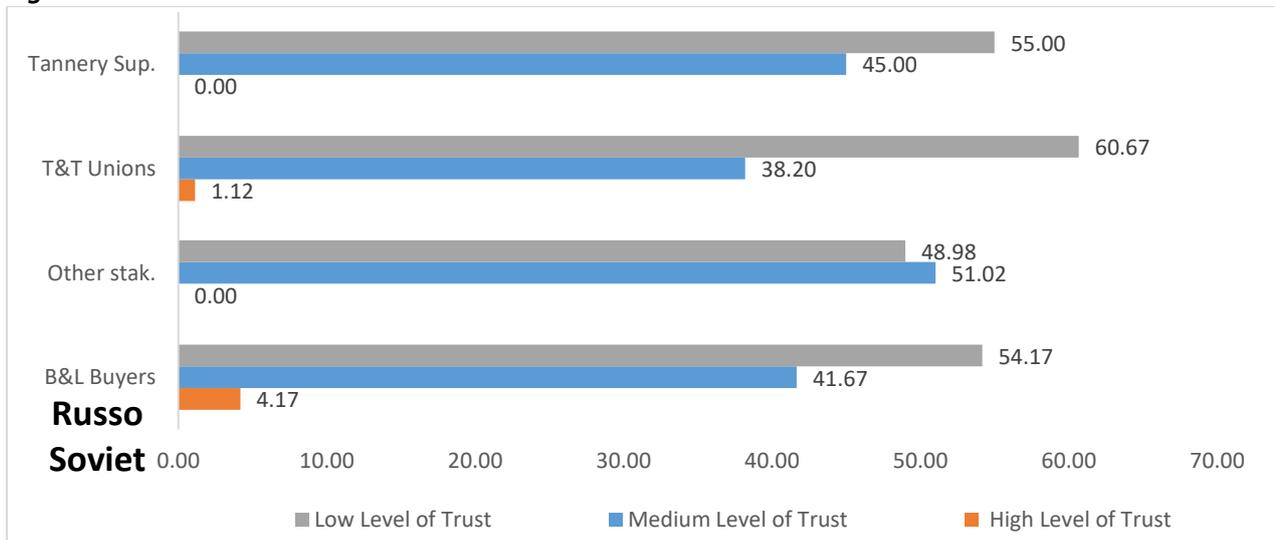


Figure 5.8c – Trust in the Russo-Soviet Countries



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Figure 5.8d – Trust in Asian Countries

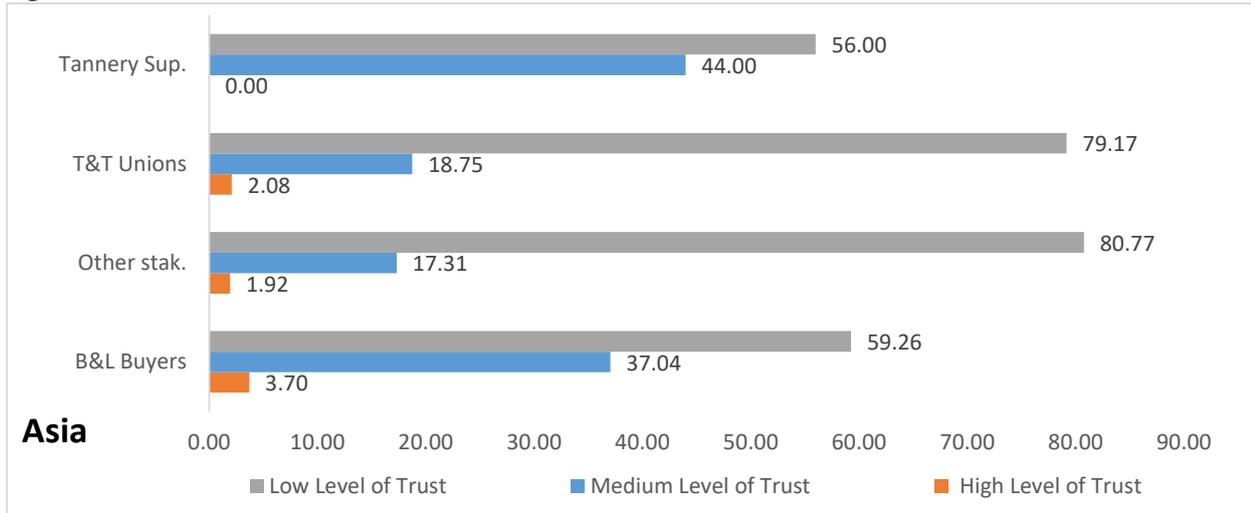


Figure 5.8e – Trust in Latin American Countries

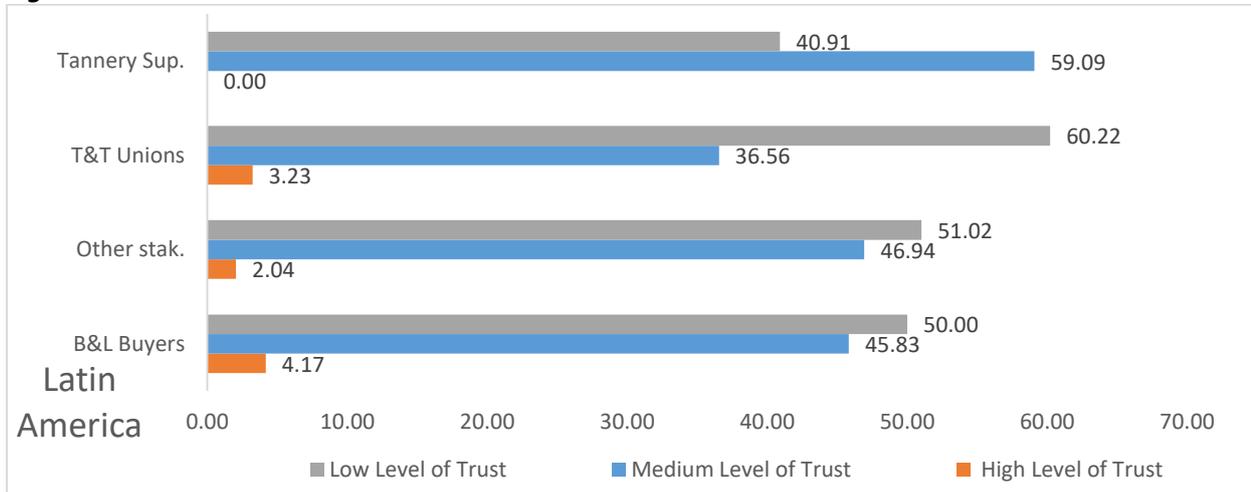
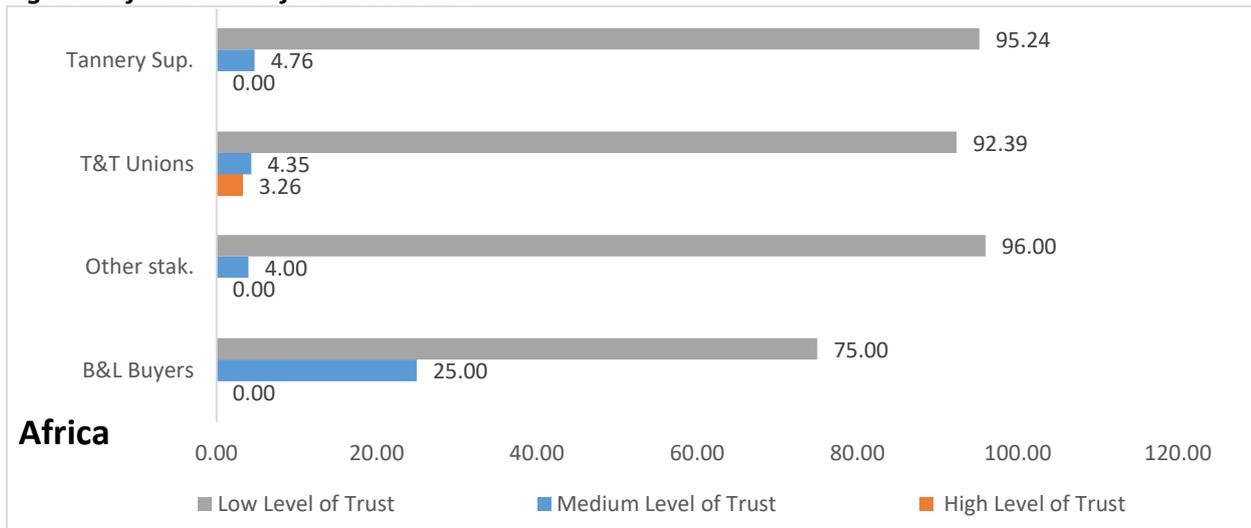


Figure 5.8f – Trust in African Countries



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Figure 5.8g – Trust in Oceania Countries

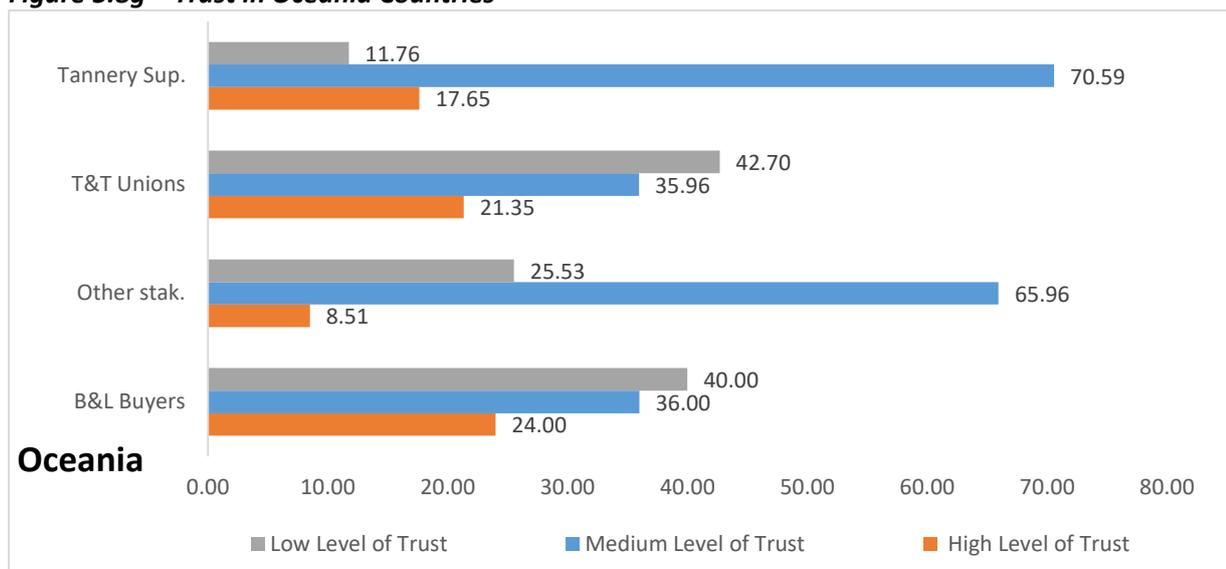
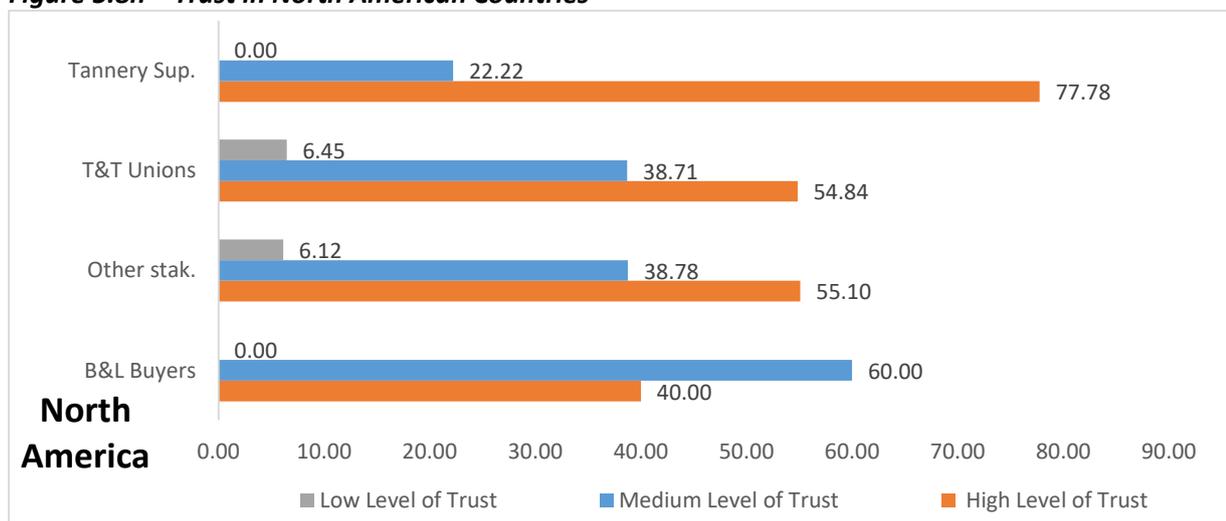


Figure 5.8h – Trust in North American Countries



The above graphs show that all suppliers have a high/medium level of trust only with respect to the EU and North American regions. The rest of the geographical areas are considered as medium/low level of trust by the stakeholders (non-EU Europe, Russia & former Soviet Republics, Asia, Latin America, Africa, Oceania, and North America). Whilst these are only perceptions, it should be noted that this represents at the minimum a marketing failure in these regions to demonstrate adherence to H&S frameworks, and at worst a lack of adherence in these regions to these frameworks. In particular, this was a particularly acute problem across the stakeholder groups for the Africa and Asia regions, where mean responses were 1.1 and 1.3 respectively (minimum score 1; maximum score 3).

This data for levels of trust in different regions of the world in relation to H&S in the leather value chain was also further investigated with respect to the type of stakeholder, the organisational size, and the country of origin, through regression estimations¹⁰. In particular, the results of the regressions are presented in the appendices (see Table A). This data shows that:

¹⁰ In particular, we regressed all the above information with respect to the type of stakeholder, the organisational size, and the country of origin, through regression estimations. In case the coefficients were significant, with a p-value lower than the chosen critical value 0.05, we reported the results of the regressions. The results are interpreted with respect to the first category of each variable, the one with the coefficient equal to zero.

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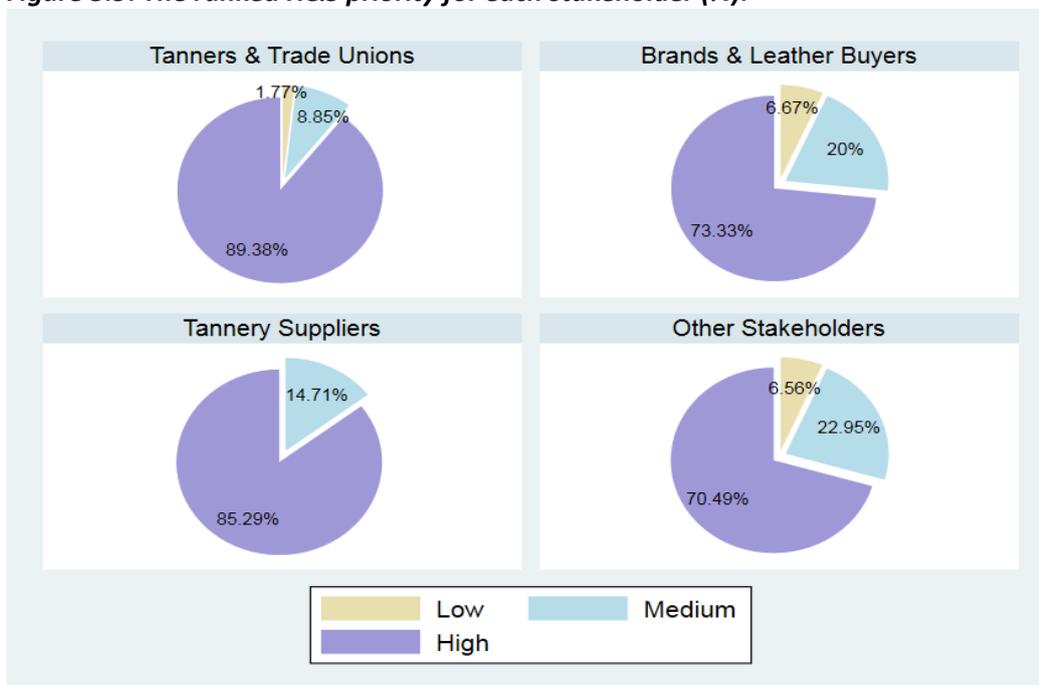
- The perception of the level of enforcement of H&S standards for the EU (Column 2) is significantly related to three of the seven countries of origin. In fact, Spanish, Italian and Romanian organisations, are more likely to trust European countries than their counterparts.
- The perception of the level of enforcement of H&S standards for non-EU countries in Europe (Column 3) is significantly related to two of the four types of stakeholder, in particular for the ‘Brands and Leather Buyers’ and the ‘Other stakeholder’ types. In fact, both these stakeholder groups are less likely to trust non-European countries than their counterparts. Moreover, the results show that Spain and Romania are more likely to trust non-European countries than other respondent countries¹¹.
- The perception of the level of enforcement of H&S standards for Oceania (Column 4) is significantly related to the dimension of the organisation. In particular, Small (11-49 employees) and Medium (50-249 employees) organisations are less likely to trust Oceania’s standards than large organisations (250+ employees). In this case, the geographical location of the stakeholder is not significant in explaining trust in Oceania’s standards.

While it is noted that the majority of the respondents are from within the EU region, this suggests a wider level of mistrust from within the industry regarding certain geographical regions. It is likely that this also relates to perceptions around general CSR, including environmental concerns. This should have a positive impact for tanneries within Europe or North America, if it is true that brands and leather buyers are more willing to trade with tanneries they trust regarding H&S. As Asia is the largest supplier of leather in the world, this does not appear to be having a direct impact on the supply. It may be that the promotion and adoption of a European framework such as OiRA in these regions (and the other regions rated as low to medium in trust) could help to improve perceptions within the sector of their adherence to H&S frameworks/processes.

5.2.2 – Tannery workplace standards and conditions:

The second research question refers to how leather products manufacturers and importers set tannery workplace standards and monitor tannery workplace conditions in their supply chain. Figure 5.9 below illustrates how the four stakeholder groups ranked their concern for workplace H&S.

Figure 5.9: The ranked H&S priority for each stakeholder (%).



¹¹ Due to sample size restrictions, only the seven main respondent countries were included in the regression analysis (England, Germany, Spain, Italy, France, Portugal and Romania).

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Figure 5.9 demonstrates that all stakeholder groups (perhaps unsurprisingly) ranked H&S as a high priority for them. In particular, tanners and trade unions (89%) saw it as a particularly high priority, whereas even other stakeholder groups still ranked it high (70%). An interesting result is that some stakeholders regard H&S as low priority. The Pearson chi-square test shows that these differences are significant ($p < 0.05$).

The data can also be explored in relation to differences between countries and organisation size (with the latter also split by stakeholder type). Table 5.7 below outlines the data for H&S priorities across Europe (again, only countries that had 10 or more responses were included in the analysis). The data reveals that there was no statistically significant difference between the eight countries ($p = 0.10$)¹², although trends were observed in relation to the proportion of respondents ranking H&S as a high priority, with Germany, Spain, France, Italy and Austria all ranking H&S higher than the UK, Portugal and Romania. Table 5.8 below also explores the ranking of H&S priorities in relation to organisational size, both overall and for each stakeholder group. The data here reveals that organisational size (either overall or by stakeholder group) does not impact upon whether a respondent ranked H&S as a high priority or not. Indeed, the differences observed here in the Pearson Chi-square test were non-significant ($p = 0.23$).

Table 5.7: H&S Priorities by Country

Country	Low	Medium	High
UK	8.3%	20.3%	70.8%
Germany	0.0%	18.5%	81.5%
Spain	2.4%	12.2%	85.4%
France	0.0%	15.4%	84.6%
Italy	0.0%	0.0%	100.0%
Portugal	6.3%	25.0%	68.8%
Romania	8.3%	25.0%	66.7%
Austria	10.0%	10.0%	80.0%

Table 5.8: H&S Priorities by Organisation Size

Stakeholder Type	Micro (0-9 staff)	Small (10-49 staff)	Medium (50-249 staff)	High (250+ staff)
Tanners & Trade Unions	84.6%	89.5%	91.1%	88.2%
Brands & Leather Buyers	100.0%	60.0%	75.0%	68.8%
Tannery Suppliers		100.0%	100.0%	100.0%
Other Stakeholders	74.1%	92.3%	50.0%	71.9%
Overall	80.0%	87.7%	84.5%	74.4%

Nb. The percentages correspond to the proportion of respondents who ranked H&S as a high priority for each group.

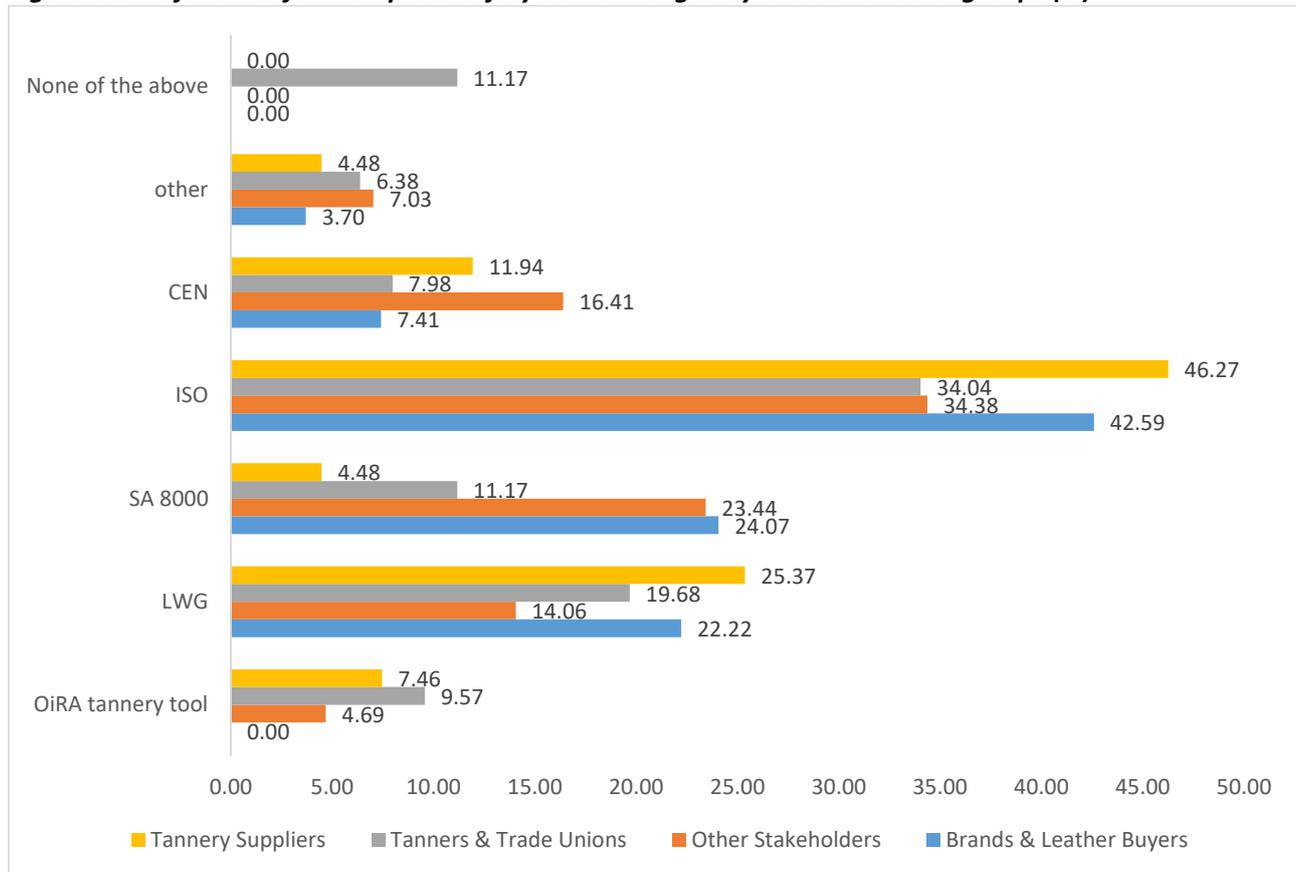
In relation to knowledge of tannery specific H&S frameworks, the survey investigated which tannery specific references for workplace safety the stakeholders were aware of. The questionnaire proposed a number of answers listing both tannery specific (OiRA Tannery Tool) and non-tannery specific (SA 8000, ISO, CEN), as well as an environmental auditing protocol with a certain reputation in the leather sector, but that does not have a H&S section (LWG).

¹²Pearson Chi-Square test is used to investigate whether among two variables there is a significant relationship. For the chi-square test, the null hypothesis assumes lack of relationship between the two variables, whilst the alternative hypothesis assumes that there is a relationship between the two variables. If like in this case, the p-value is bigger than the chosen critical value (0.05) then the differences are not significant ($p > 0.05$), thus there is not a statistically significant relationship between the two variables. If the p-value is lower than the chosen critical value (0.05) then the differences are significant and, therefore, there is a statistically significant relationship between the two variables. The threshold of 0.05 reflects a 5% chance that the differences observed are random, hence a p value of below this gives a high degree of confidence that an observed relationship is real.

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Figure 5.9 below shows the results.

Figure 5.9: References for workplace safety acknowledged by the stakeholder groups (%).



The results demonstrate that all four stakeholder groups ignore to a very large extent the only tannery-specific tools for tannery workplace risk assessment. ISO, a standard that provides only a framework that needs to be adapted to the specific needs of the sector, is the leading reference point, followed by the LWG which does not address H&S in its auditing protocol. SA 8000, a generic tool, occupies the third rank. In particular, 46% of the tannery suppliers, 43% of the brands & leather buyers, 34% of the other stakeholders, and 34% of the tanners & trade unions acknowledged ISO.

The less recognized reference is OiRA, only known/used by 6% of respondents overall, albeit nearly 10% of tanneries and trade unions were aware of it. For OiRA, the only tannery specific tool, this demonstrates a need to raise its profile in the sector if it is to become more widely used. OiRA was developed in 2012 and after 5 years of existence has already reached a certain audience. From the References listed, only the OiRA tannery tool and LWG are leather specific, the others having no content that relates specifically to the leather sector. However, the LWG protocol has no H&S requirements, as it is essentially an environmental auditing tool for tanneries. In the LWG audit there are however, some of the sections covering questions around H&S safety such as the emergency plans, first aid and H₂S gas. However, the introduction of the new LWG chemical module is reported to address some of the concerns around handling of hazardous chemicals. The adoption of LWG by certain brands although not H&S specific, may give some general confidence of good practice in audited tanneries. However, those having responded with LWG have either misunderstood the question or don't actually know the LWG protocol but acknowledge simply its reputation in the leather sector.

The high response regarding ISO standards is to be expected as companies tend to be familiar with these internationally recognised frameworks. In reality the ISO 45001 H&S management standard was not launched until March 2018 and is not tannery specific, suggesting that respondents are not really acquainted with the

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instruments existing on the market. The SA 8000 standard is an internationally recognised private standard, however it is primarily concerned with social accountability, of which H&S forms a part, but it is not a H&S risk assessment tool.

5.2.3 – Stakeholder interaction within/with the leather value chain:

This section presents the results of the questions that relate specifically to each or some of the stakeholder groups, in order to investigate the more in-depth aspects related to each of the different stakeholders. It seeks to explore this data in relation to the third research question centred upon ‘how stakeholders and observers interact with the leather value chain’. For each data point explored, information will be provided as to which of the four stakeholder groups responded to the data point described.

Figure 5.10 investigates whether respondents ask for assurances on the implementation of a H&S RAR from their leather suppliers. This is so as to seek information on how leather buyers (whether other tanneries, brands or leather articles manufacturers, consumers and/or NGOs) try to ascertain how own or foreign leather supplies comply with H&S standards upstream in their supply chains. This was asked to the ‘Other stakeholder’, ‘Tanneries and Trade Unions’, and ‘Brands and Leather Buyers’ groups. Whilst the proportion of tanneries not seeking supplier RAR assurances is high (42%) this might be to do with Tanners being active in supply-chains where they know their suppliers intimately and where their relationships are characterised by high levels of trust. In these instances, particularly if suppliers are also from Europe and North America, they may not see the need/value for RAR audits.

Figure 5.10: Assurances on the implementation of a H&S RAR from leather suppliers (%).

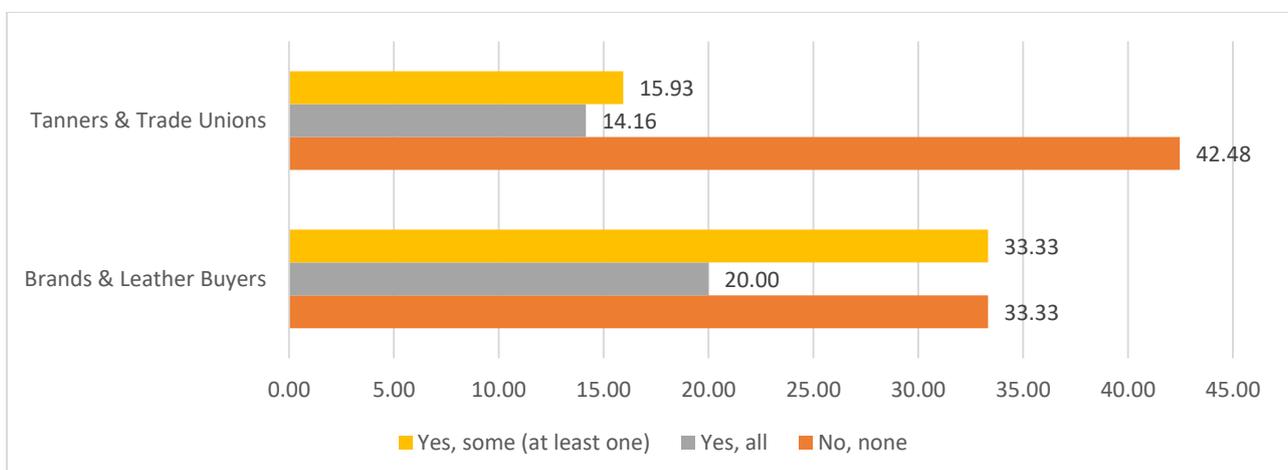
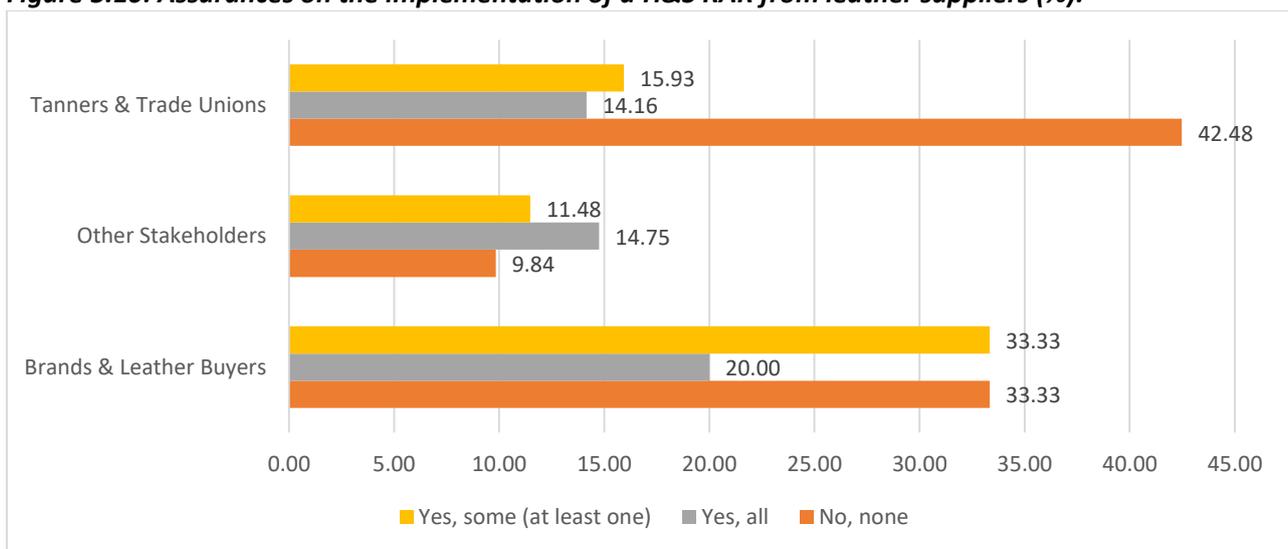


Table 5.9: Assurances on the implementation of a H&S RAR from leather suppliers and market sector (%).

Assurances on the implementation of a H&S RAR	Footwear	Clothing	Leather Accessories	Furniture	Automotive
No, none	38.10	6.25	20.00	33.33	100.00
Yes, all	19.05	31.25	40.00	33.33	0.00
Yes, some (at least one)	42.86	62.50	40.00	33.33	0.00
Overall	100.00	100.00	100.00	100.00	100.00

Table 5.10 Assurances on the implementation of a H&S RAR from leather suppliers and Tanner and trade union (%).

Assurances on the implementation of a H&S RAR	Tannery owner	Tannery worker	Trade unionist
No, none	72.73	50.00	25.00
Yes, all	13.64	22.50	25.00
Yes, some (at least one)	13.64	27.50	50.00
Overall	100.00	100.00	100.00

The highest demand for upstream H&S RARs came from the brands and leather buyers group with over half of respondents asking for RARs from at least one of their suppliers. It would be expected that more brands and leather buyers would seek assurance from their suppliers regarding H&S RARs. High profile brands are at the highest risk of reputational damage if NGOs decide to investigate supply chain issues. The survey suggested that brands and leather buyers have a high level of trust regarding H&S for suppliers within Europe. If the brand is sourcing from within Europe, then they may not feel it is necessary to seek assurance. The following tables report if there are any statistical differences with implementation of a H&S RAR from leather suppliers and nationality, type of stakeholder and organisational size¹³.

Table 5.11: Implementation of a H&S RAR from leather suppliers and origin country (%) (Chi-square).

Response	UK	German	Spain	France	Italy	Portugal	Romania	Total
No, none	26.67	37.50	55.56	52.94	42.31	92.31	77.78	52.83
Yes, some (at least one)	46.67	37.50	16.67	41.18	26.92	7.69	0.00	26.42
Yes, all	26.67	25.00	27.78	5.88	30.77	0.00	22.22	20.75
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Pearson chi2(12) = 23.1464 p = 0.027								

Table 5.12: Implementation of H&S RAR from leather suppliers/dimension of the organization (%) (Chi-square).

Response	Micro (up to 10 employees)	Small (11-49 employees)	Medium (50-249 employees)	Large (250+ employees)	Total
No, none	52.94	61.11	60.98	20.59	49.22
Yes, some (at least one)	29.41	22.22	19.51	38.24	26.56
Yes, all	17.65	16.67	19.51	41.18	24.22
Total	100.00	100.00	100.00	100.00	100.00
Pearson chi2(6) = 16.2777 p = 0.012					

¹³ Chi-square cross-tabulation tables are merely a means of exploring breakdowns of data by two or more groups. It enables the researcher to explore how well the data fits a standard distribution and identify anomalies (i.e. where one category has more or less than we would expect to see).

Table 5.13: Implementation of a H&S RAR from leather suppliers and type of stakeholder (%) (Chi-square).

Response	Tanners & Trade Union	Brands & Leather Buyer	Other stakeholders	Total
No, none	58.54	38.46	27.27	49.23
Yes, some (at least one)	21.95	38.46	31.82	26.92
Yes, all	19.51	23.08	40.91	23.85
Total	100.00	100.00	100.00	100.00
Pearson chi2(4) = 9.7823 p = 0.044				

Table 5.14: Implementation of a H&S RAR from leather suppliers and type of stakeholder (%) (Chi-square).

Response	Tanners & Trade Union	Brands & Leather Buyer	Total
No, none	58.54	38.46	53.70
Yes, some (at least one)	21.95	38.46	25.93
Yes, all	19.51	23.08	20.37
Total	100.00	100.00	100.00
Pearson chi2(2) = 3.6801 p = 0.159			

The chi-square associated to the assurances on the implementation of a H&S RAR from the leather suppliers, shows that the information is significantly related ($p < .05$) with the type of stakeholder, the dimension of the organizations and the country of origin. Indeed, Italy and Spain have particularly high levels of supply assurance on H&S; whilst larger organisations also have a greater focus on H&S assurances in the supply chain. However, this significance does not remain when only the analysis only contains Tanners and Trade Unions and Brands and Leather Buyers. This suggests that some of the differentiation in the statistical results is driven by the ‘Other Stakeholders’ category. This is perhaps understandable given the very different nature of these organisations, which could be distorting the data slightly in relation to differences between all three stakeholder groups (hence the non-significant results when Other Stakeholders are removed from the analysis).

Leather suppliers and leather buyers, share several common questions in the questionnaire that the other two stakeholder groups did not respond to. Specifically, these questions related to:

- Providing information to customers on their implementation of H&S frameworks.
- The offer of in-factory training on H&S to suppliers.
- The drafting of H&S RARs internally/externally.
- Availability of H&S RARs for personnel/staff.
- Information held on supplier H&S RARs.
- Awareness of H&S in tannery workplaces.
- Customers downstream in the supply-chain seeking assurances on H&S.
- Customers auditing tanneries and trade unions on production process safety.
- Tanneries/trade unions and brands/leather buyers auditing suppliers on production process safety.
- Independent certification of suppliers H&S RARs.
- Termination of business with those suppliers who will not verify their H&S procedures.

With respect to how stakeholders disseminate their H&S RARs, the survey investigated if leather suppliers and leather buyers offer information on tannery workplace safety in their supply chain to customers downstream or to consumers respectively. The data reveals that the majority of both groups did not offer information on H&S to their customers (more than 50% for both groups) (see Figure 5.11).

Figure 5.11: Stakeholder offering information on H&S to their customers/consumers (%).

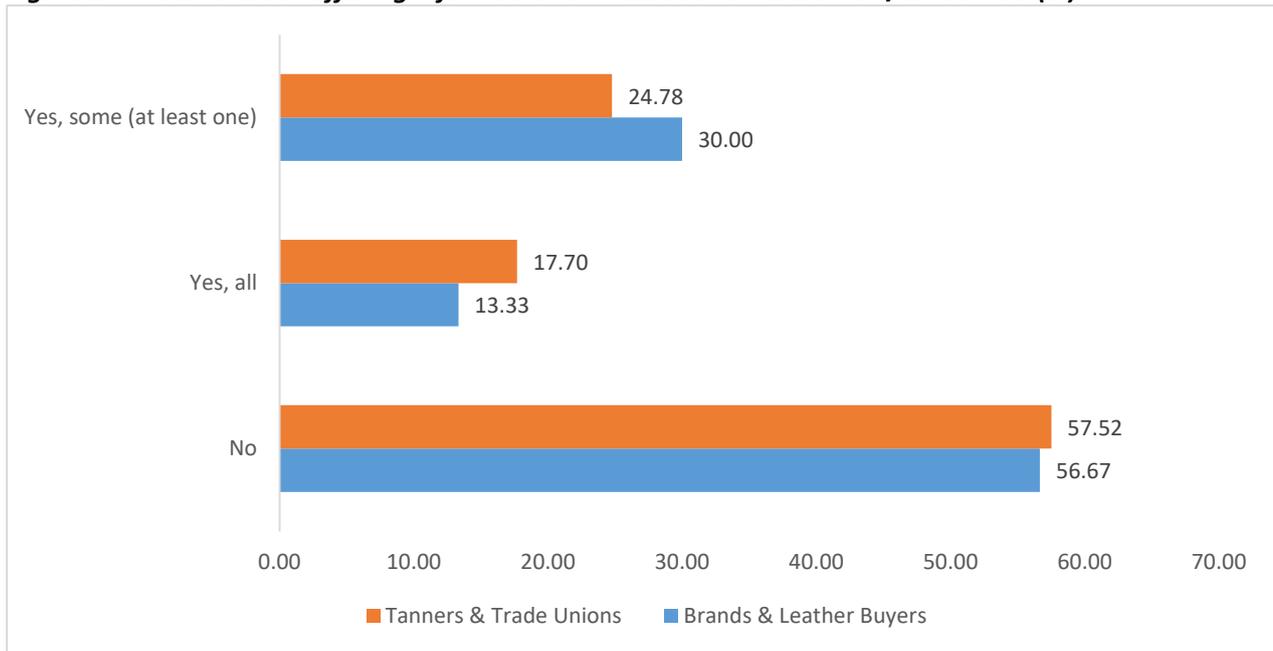


Table 5.15: Stakeholders offering information on H&S to their customers/consumers (row) and preventing reputational damage through independent certification of supplier (column) (%) (Chi-square).

Stakeholder offering information	Preventing reputational damage	
	None	Yes
No, none	62.16	53.42
Yes, some (at least one)	27.03	26.03
Yes, all	17.65	16.67
Total	100.00	100.00
Pearson $\chi^2(2)=1.6897$ Pr=0.430		

Table 5.16: Stakeholder offering information on H&S to their customers/consumers (row) and customers auditing tannery workplaces on the safety of production processes (column) (%) (Chi-square).

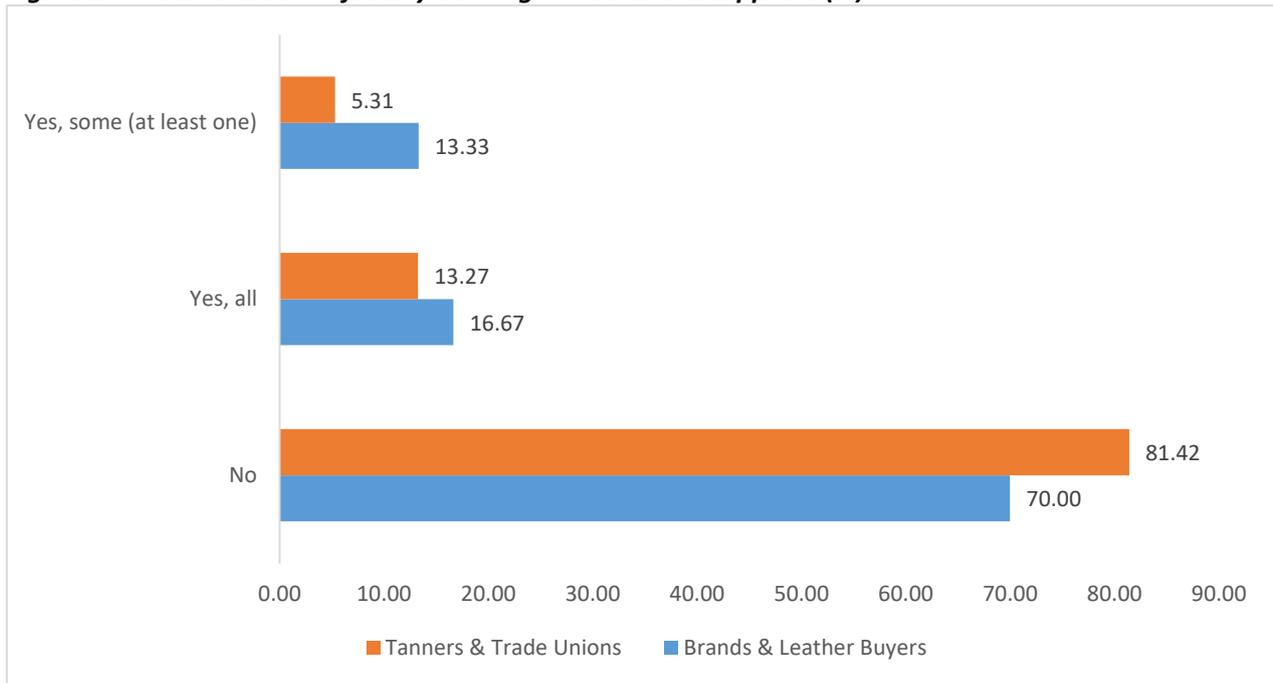
Stakeholder offering information	Customers auditing tannery workplaces		
	None	Yes, some (at least one)	Yes, all
No, none	73.91	41.82	42.11
Yes, some (at least one)	20.29	36.36	15.79
Yes, all	5.80	21.82	42.11
Total	100.00	100.00	100.00
Pearson $\chi^2(2)= 23.3540$ Pr=0.000			

Only the chi-square of the ‘stakeholder offering information on H&S to their customers/consumers’ associated with the ‘customers auditing tannery workplaces’ is significant ($p < 0.05$). This demonstrates that the differences among the stakeholders that offer the information and those that don’t are related to the customers’ auditing process.

The data also explored whether stakeholders offered in-factory training in H&S to their suppliers (see Figure 5.12). The data reveals that in-factory training in H&S is not commonly provided to suppliers (70% for brands and leather buyers and approximately 80% for tanneries and trade unions). There is therefore significant scope for improvement in this area, as it is not common procedure to seek assurances on H&S upstream in the leather supply chain or to support the development of this through training.

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Figure 5.12: Stakeholder in-factory training in H&S to the suppliers (%).



Both tanneries and trade unions and brands and leather buyers also reported on how their H&S RARs have been drafted, in particular whether they were developed in house or externally (i.e. by a consultant). Figure 5.13 provides an overview of the findings here.

Figure 5.13: How the H&S RAR has been drafted (%).

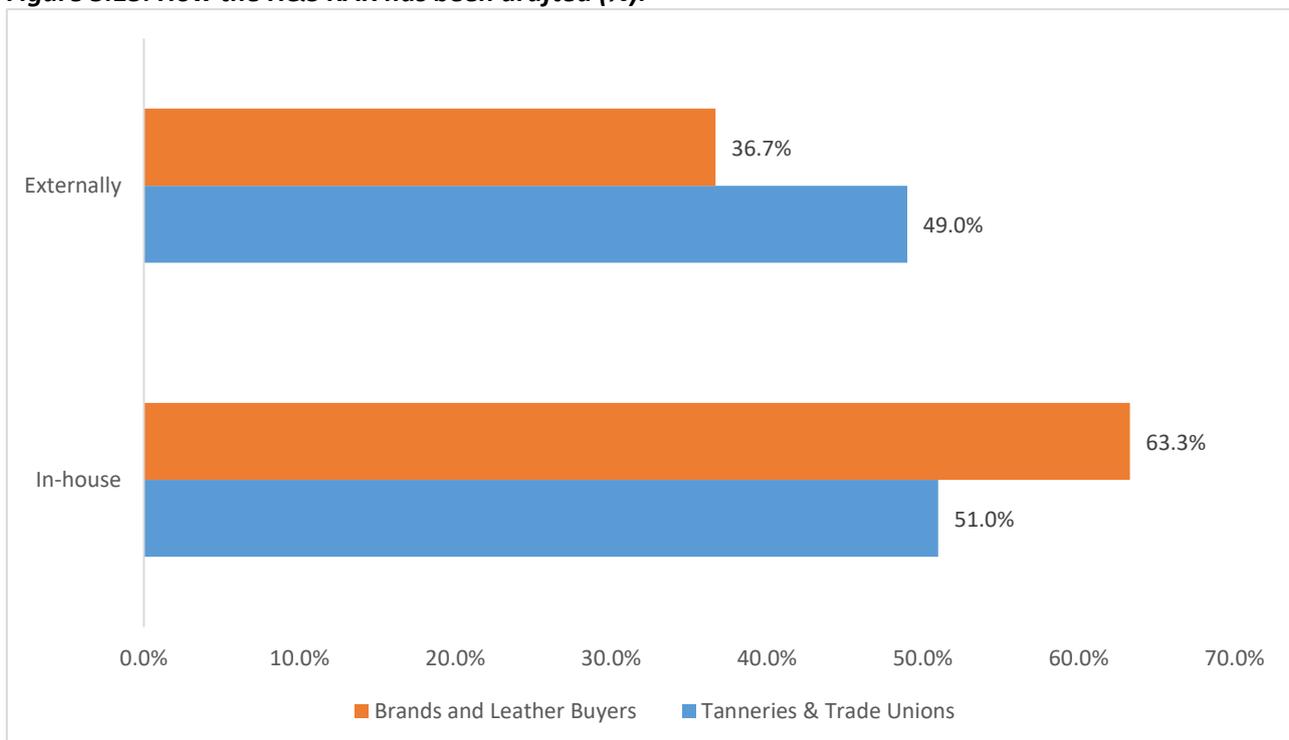


Figure 5.13 shows that for both stakeholder groups the majority drafted the H&S RARs for tannery workplace safety in-house (tanneries and trade unions = 51%; brands and leather buyers = 63%). However, the distribution of the answers between groups is different, as nearly two-thirds of the brands and leather buyers have defined in-house the H&S RAR that they intend to apply to their leather supplies, whilst only just over half of tanneries and trade unions have done likewise. This is almost certainly related to the differences in

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organisational size noted earlier in the report, as the larger brands and leather buyers will have increased internal capacity to develop RARs in-house compared with the smaller tanneries and trade unions. The Pearson Chi-squared test for this difference is however not significant ($p = .16$). Chi-squared tests were also run on in-house versus external RAR production in relation to: country of origin, organisational size, whether they believe an RAR is useful or not, whether customers seek assurances on H&S, and whether respondents sought H&S assurances from suppliers. The only two that demonstrated significant relationships were country of origin and whether an organisation sought H&S assurances from their suppliers. Tables 5.17 and 5.18 illustrate these results.

Table 5.17: H&S RAR Drafting versus Country of Origin (%) (Chi-square).

H&S RAR	Countries							
	UK	Germany	Spain	France	Italy	Portugal	Romania	Other
In-house	91%	91%	17%	84%	16%	31%	77%	63%
External	9%	9%	83%	16%	84%	69%	23%	37%
Total	100%	100%	100%	100%	100%	100%	100%	100%
Pearson $\chi^2(2) = 49.9$ $p < .001$								

Table 5.18: H&S RAR Drafting versus Supplier H&S Auditing (%) (Chi-square).

H&S RAR	Audit Supplier		
	No	Yes	I don't have a leather supplier
In-house	44.6%	62.9%	70.8%
External	55.4%	37.1%	29.2%
Total	100%	100%	100%
Pearson $\chi^2(2) = 6.5$ $p = .039$			

The data in Tables 5.17 and 5.18 reveals that there are stark differences between different countries in relation to whether H&S RARs are drafted internally or externally, with the UK, Germany and France having a very high prevalence for in-house development, and Spain, Italy and Portugal focusing on external RAR development. In relation to supplier auditing of H&S there was also a significant difference, with those that drafted their RAR internally almost twice as likely to audit their suppliers than those that drafted their RARs externally. Why these relationships exist is hard to ascertain, but it may be that in-house development of RARs opens organisations up to a more holistic view of H&S in the leather value chain, given that they are more intrinsically bought in to the process. Given the above findings on organisational size as well, it may be that larger organisations that have the capacity to develop in-house RARs will also see the reputational benefits of upstream auditing as well. Another aspect investigated in relation to H&S RARs is if it is available to personnel/staff (see Figure 5.14).

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Figure 5.14: Availability of the H&S RAR for the personnel (%).

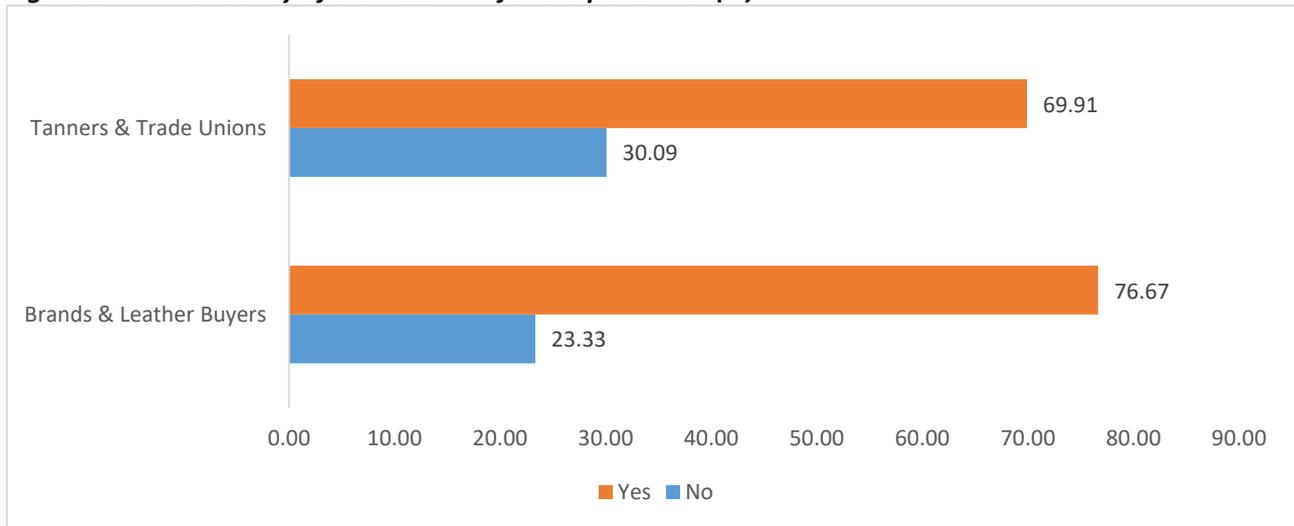


Figure 5.14 illustrates that both stakeholders make their H&S RARs available to personnel, with 70% of tanneries and trade unions and 77% of brands and leather buyers doing so. The EU-OSHA directive 89/391/EEC “Framework Directive” indicates that it is the responsibility of employers to inform employees regarding the risks associated with the work they conduct, which suggests that the H&S RAR should be available to all personnel. While the implementation of this provision with regards to how this is communicated is left for being regulated by EU member States, it is obvious that without access to the relevant documentation an employer has no evidence that they are meeting their obligations. It may be that the respondents are unaware of the obligations, or manage the communication in an alternative manner. The responses suggest the need for a greater understanding within companies around H&S RAR obligations and communication, and also of the mandatory legal requirement within the EU for RARs to be in place.

Data was also captured from tanneries and from leather buyers as to whether they know if their leather suppliers keep and apply a H&S RAR (see Figure 5.15 below).

Figure 5.15: Leather suppliers keeping and applying a H&S RAR (%).

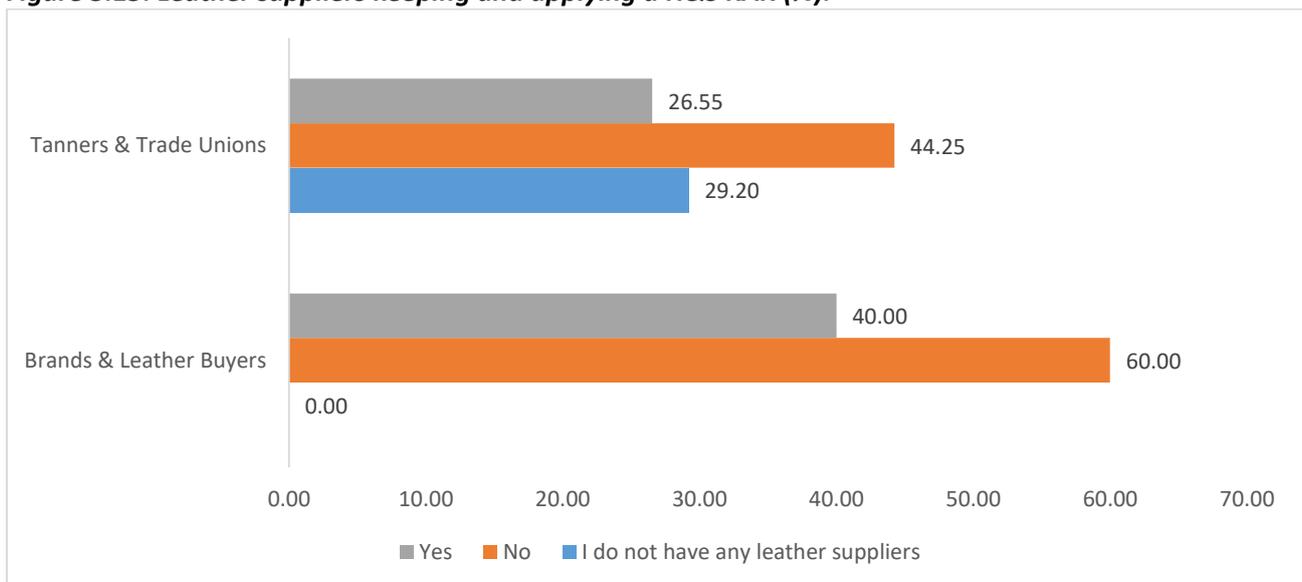


Figure 5.15 demonstrates that the majority of both groups do not know if their leather suppliers keep and apply a H&S RAR. In particular, 60% of the brands and leather buyers and 44% of the tanneries and trade unions do not know if their leather suppliers keep and apply a H&S RAR. For the tanneries’ group, if those who do not have a leather supplier are removed from the analysis, the revised figure for no awareness of

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supplier H&S RARs is nearly two-thirds (62.5%). This evidences a lack of awareness of H&S practices in upstream suppliers in the value chain and exposes downstream brands and manufacturers to reputational risks. We also investigate the chi-square in relationship to the country of origin, but the results are not statistically significant, whilst the chi-squares are significant with respect to the assurance in the implementation of RAR and the awareness of the workplace safety.

Table 5.19: Leather suppliers keeping and applying a H&S RAR versus assurance in the implementation of RAR (%) (Chi-square).

H&S RAR	Audit Supplier		
	No, none	Yes, some (at least one)	Yes, all
No	84.48	51.85	9.52
Yes	15.52	48.15	90.48
Total	100%	100%	100%

Pearson $\chi^2(2) = 37.8938$ $p = .0000$

Table 5.20: leather suppliers keeping and applying a H&S RAR versus awareness of the workplace safety (%) (Chi-square).

H&S RAR	Audit Supplier			
	No, none	In some	In over 50%	In all
No	100.00	68.89	47.83	20.00
Yes	0.00	31.11	52.17	80.00
Total	100.00	100.00	100.00	100.00

Pearson $\chi^2(2) = 31.2671$ $p = .0000$

The survey therefore addressed to what extent the two stakeholder groups are in general “aware” of workplace safety in the tanneries from which they get the leather supplies (see Figure 5.16).

Figure 5.16: Awareness of workplace safety in the tanneries (%).

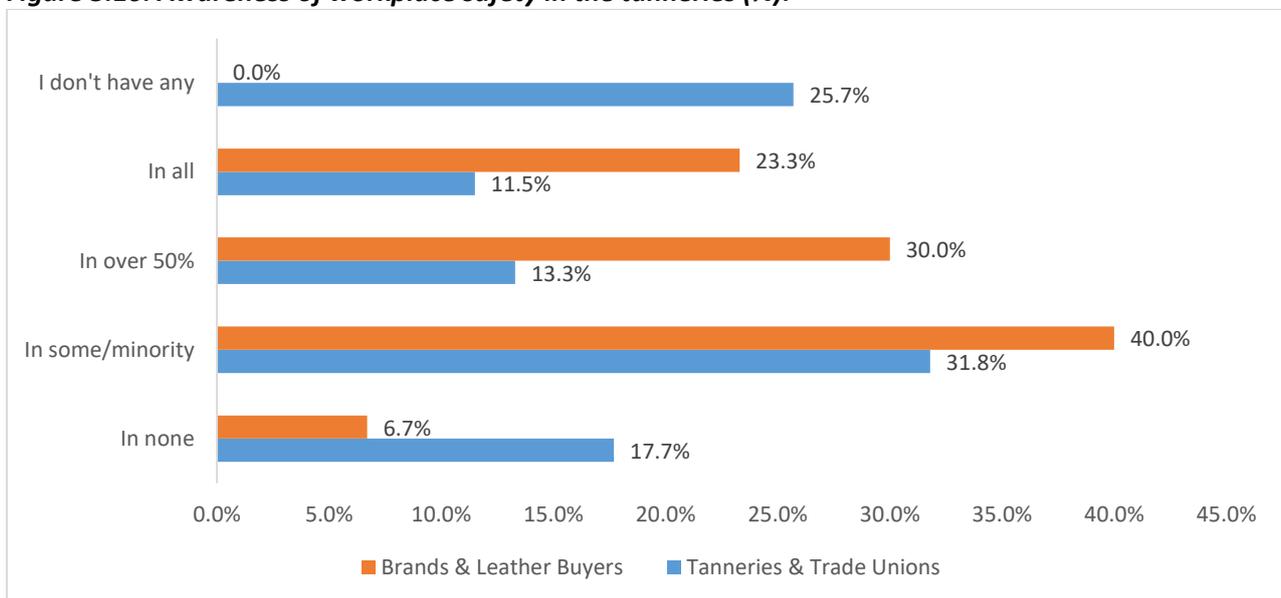


Figure 5.16 above shows that for tanneries, awareness of workplace safety in the majority or all of their supplier tanneries is low (25.8%), whilst the equivalent figure for brands and leather buyers is much higher (53.3%). This is also reflected by the fact that twice as many brands and leather buyers (23.3%) have H&S awareness across all their suppliers compared with tanneries and trade unions (11.5%). However, the difference is not as stark as first appears, if the tanneries who do not have any leather suppliers are removed from the analysis, then awareness rises to one-third (33.4%) for tannery awareness in all or the majority of their suppliers, and 15.9% for all suppliers. Still, brands and leather buyers, still have greater knowledge of

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their suppliers' H&S practices. It must be noted though that we need to remain cautious in relation to interpreting these results, as it remains to be seen how truthful companies are being (more in relation to capacity than intention) in having knowledge of their supplier's H&S practices, especially when said supplier might be 3 or 4 tiers removed in the value chain. As was noted earlier, awareness of and auditing of supplier H&S is more prevalent in larger organisations (especially BRANDS AND LEATHER BUYERSs) and those organisations that draft their own RARs in-house, which would suggest a greater capacity to monitor H&S in complex supply-chains, even if that monitoring is not always effective to the maximum.

Another topic investigated by the survey is whether the tanneries and trade unions and brands and leather buyers' customers ask for assurances on the implementation of a H&S RAR (see Figure 5.17).

Figure 5.17: Customer/Consumers asking for assurances on the implementation of a H&S RAR for leather workplaces (%).

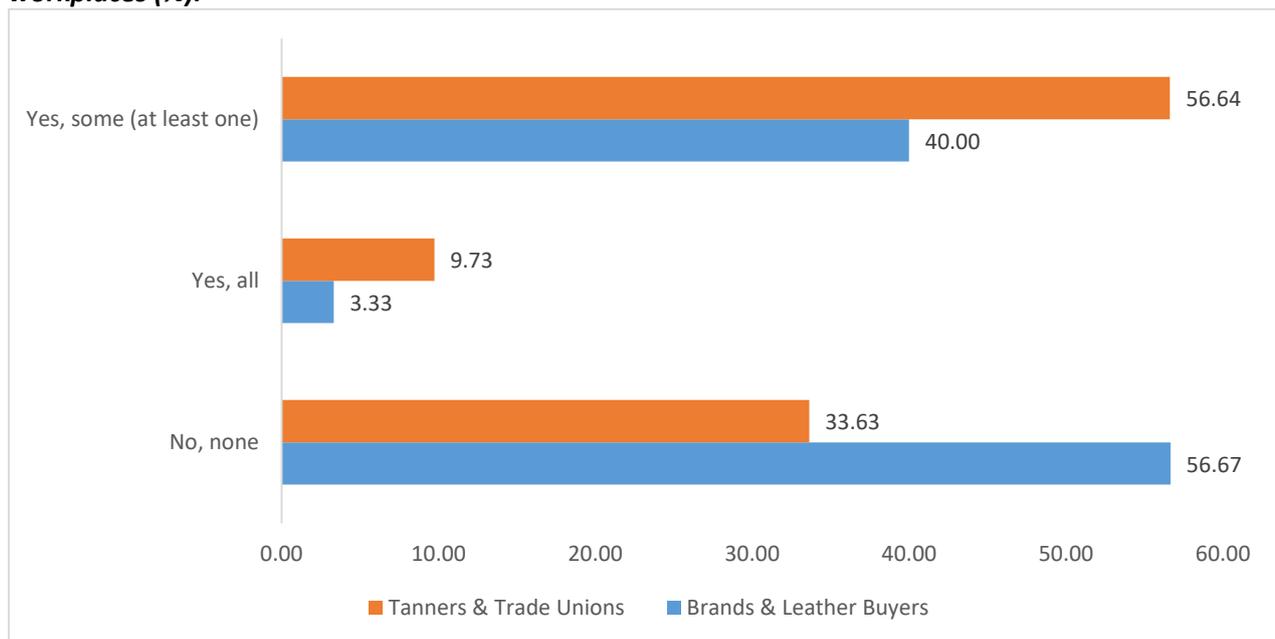


Figure 5.17 reveals a dichotomy between tanneries and brands and leather buyers in relation to customer assurance seeking on H&S RARs for tannery workplace safety. Indeed, 57% of the brands and leather buyers and only 34% of the tanneries do not have customers asking for assurances on the implementation of a H&S RAR for their leather supplies, whilst some 10% of tanneries and 3% of all their customers/consumers do. This reveals an incipient trend that is probably spearheaded by the luxury sector, where high-end leather producers and their customers develop closer due diligence with regard to workplace safety, than other segments in the leather industry. This new trend is confirmed by further survey results indicating that 40% of the brands and leather buyers and 57% of the tanneries have customers asking for at least one assurance on the implementation of a H&S RAR in tannery workplaces. Yet, workplace safety in brand's supply chains is becoming increasingly an issue in the textile sector and is likely to expand with demands for "social labelling". For tanneries with business customers (including brands and leather buyers) it seems that the request for assurances from customers has become a more frequent feature.

With Brands and leather buyers being the highest profile group in the leather supply chain, if NGOs were to highlight bad practice regarding H&S issues in the leather supply chain, it would be the brands who would be publicised and their reputation damaged. Furthermore, in relation to leather buyers, the survey also explored whether tanners' customers audit the workplaces of their leather suppliers on the safety of their production processes (see Figure 5.18).

Figure 5.18: Customers auditing tannery workplaces on the safety of production processes (%).

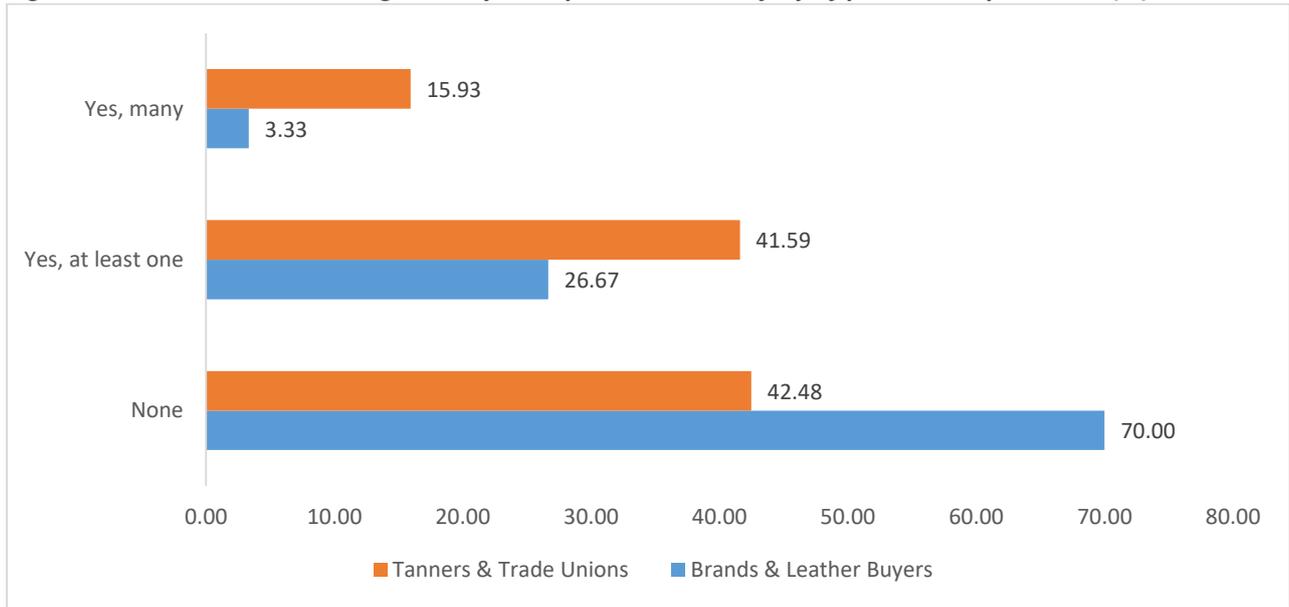
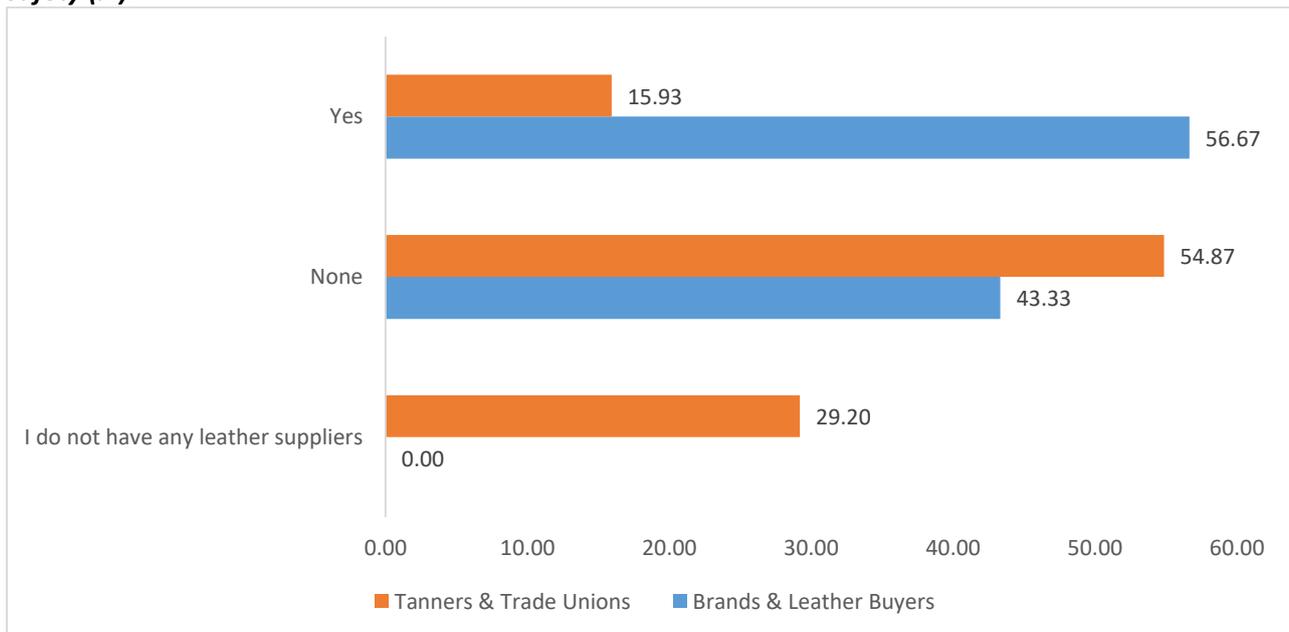


Figure 5.18 identifies distinct differences between tanneries and brands and leather buyers. Whilst for both groups most of the customers do not audit the safety of workplace production conditions of their leather suppliers, the difference in the percentages between groups is wide, with only 43% for the tanneries and 70% for the brands and leather buyers’ customers respectively not auditing safety. This again may relate to the different types of customers that the two stakeholder groups engage.

The survey also investigated whether the tanneries and trade unions and the brands and leather buyers audit their leather suppliers on tannery workplace safety (see Figure 5.19).

Figure 5.19: Tanneries and brands and leather buyers auditing their leather suppliers on tannery workplace safety (%).



About a third of the surveyed tanneries report not to have leather supplies, i.e. that they start from the raw hide or skin. Survey data also revealed that most of the tanneries do not audit their leather suppliers on

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tannery workplace safety (55%). This feature is even more marked if those tanneries that do not have leather suppliers are removed from the sample (77.5% of tanneries not auditing their suppliers). Conversely most of the brands and leather buyers do (57%). This may be related to the fact that most tanners, when they purchase wet-blue or crust, do it from suppliers they know, for reasons of quality and compatibility with their own production process. Having in-depth knowledge of the leather production process and its related risks, they may feel that auditing suppliers is not as critical. However, this cannot be ascertained from the data, but from further research and speaking with Tanneries and Trade Unions. It is also unknown what type of audit this may be.

When analysis of the auditing of leather suppliers is carried out by country, it reveals that there are particularly high auditing practices in the UK, Romania, France and Italy (see Table 5.21). Equally, organisational size is a key factor with auditing propensity increasing along with organisational size (see Table 5.22).

Table 5.21: Tanneries and trade unions and the brands and leather buyers auditing their leather suppliers on tannery workplace safety versus Country of Origin (%) (Chi-square).

H&S RAR	Countries						
	UK	Germany	Spain	France	Italy	Portugal	Romania
No	36.36	28.57	66.67	41.67	56.00	92.86	61.54
Yes	45.45	14.29	22.22	29.17	28.00	0.00	30.77
I do not have any leather supply	18.18	57.14	11.11	29.17	16.00	7.14	7.69
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Pearson chi2(2) =27.1324 Pr = 0.007							

Table 5.22: Tanneries and trade unions and the brands and leather buyers auditing their leather suppliers on tannery workplace safety versus Organisational Size (%) (Chi-square).

Stakeholder Type	Micro (0-9 staff)	Small (10-49 staff)	Medium (50-249 staff)	High (250+ staff)
No	55.56	55.81	59.18	36.36
Yes	16.67	16.28	18.37	48.48
I do not have any leather supply	27.78	27.91	22.45	15.15
Total	100.00	100.00	100.00	100.00
Pearson chi2(2) =13.8392 Pr = 0.031				

Figure 5.20 reveals that for Tanneries and BRANDS AND LEATHER BUYERS written commitments and visits to tanneries were the most common type of RAR implementation assurance, whereas for the Other Stakeholder group independent certification was the most common form of RAR assurance. Figure 5.21 shows that this remained the same for tanneries when seeking assurances for customers, but interestingly BRANDS AND LEATHER BUYERS changed to independent certification when seeking assurances downstream in the supply chain. For BRANDS AND LEATHER BUYERS their downstream users will include the end consumer. Consumers may be more likely to seek independent certification regarding RAR assurance, as they are less likely to understand the leather supply chain and potentially regard independent certification as the most rigorous assurance. Tanneries purchasing leather from another tannery are likely to have an understanding of how their supplier is operating and consider written assurance enough.

Figure 5.20: If you ask for assurances on the implementation of a H&S RAR from your leather suppliers, it is (%):

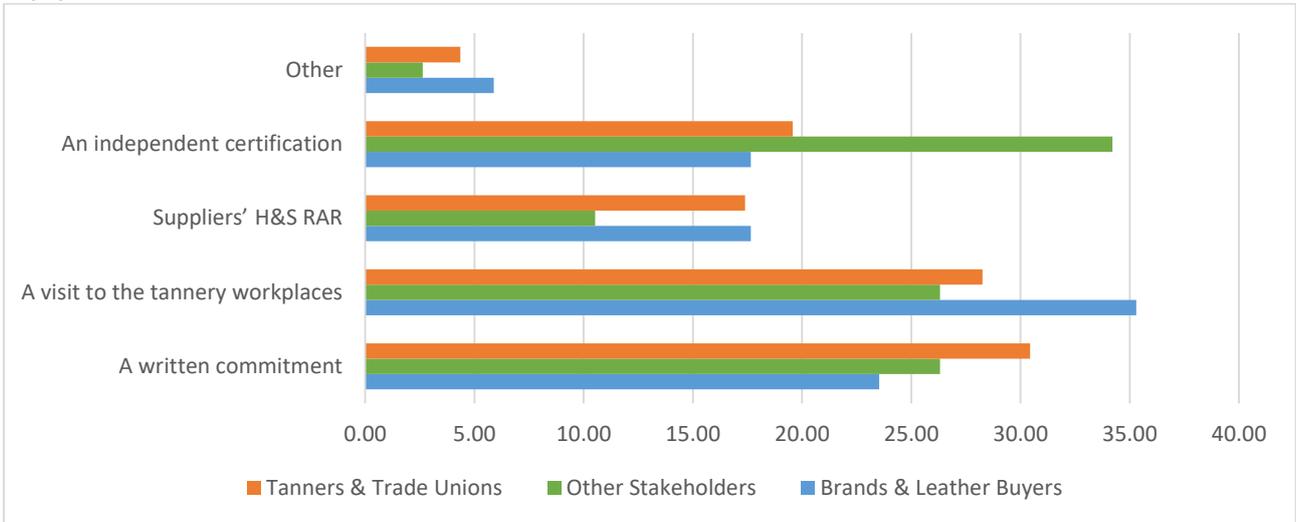
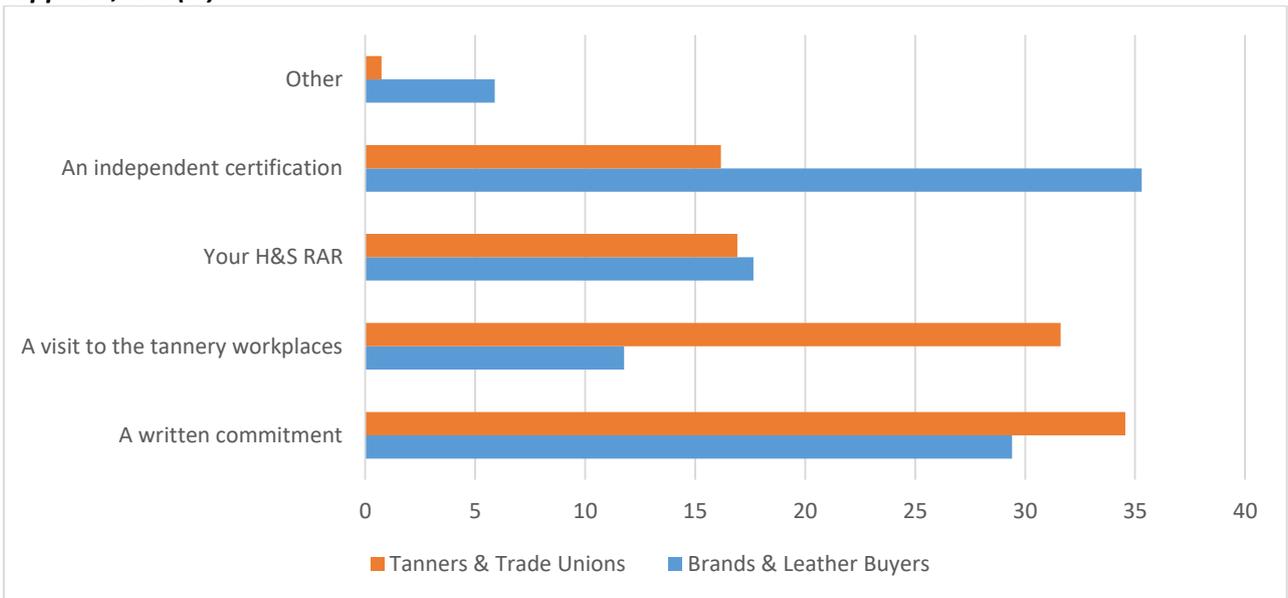
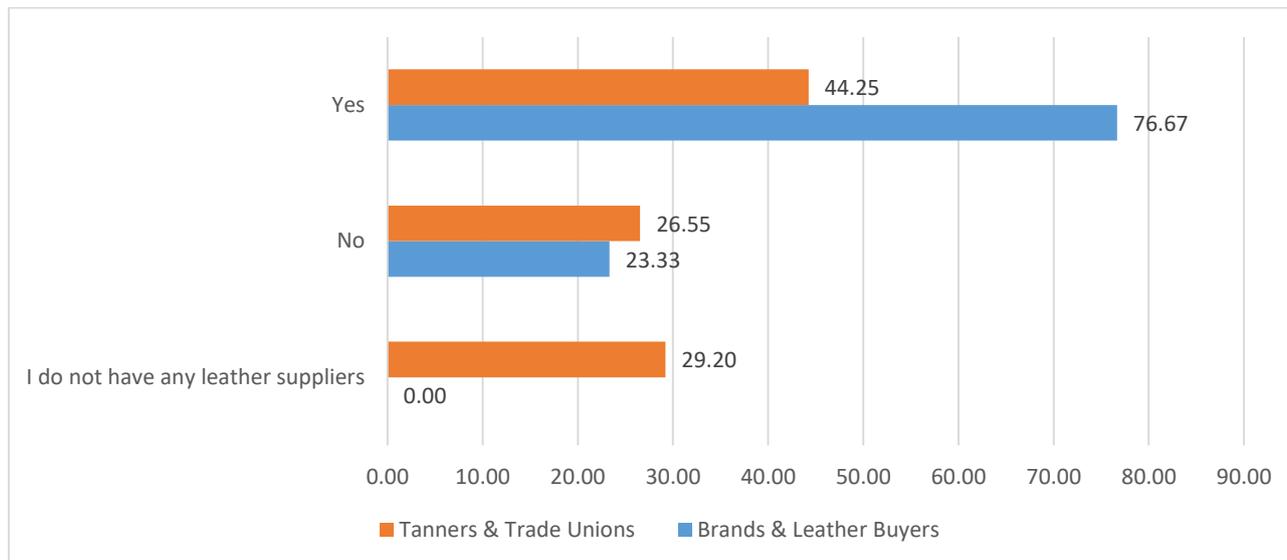


Figure 5.21: If your customers ask for assurances on the implementation of a H&S RAR from your leather suppliers, it is (%):



Reputational risk was also explored in the survey, with stakeholders asked to indicate if reputational damage can be prevented through the provision of independent certification of supplier H&S RARs (see Figure 5.22).

Figure 5.22: Preventing reputational damage through independent certification of supplier RARs (%).



Both stakeholder groups, leather suppliers and leather buyers, acknowledged the value of independent certification of H&S practices in tanneries for reassuring the trade along the value chain. Indeed, the survey data evidenced that if suppliers of leather provided both to other tanneries or to tanners’ customers independent certification on their implementation of H&S RARs, then reputational damage can be prevented (44% of tanneries and trade unions; 76% of brands and leather buyers). Again, if those tanneries reporting that they do not have leather suppliers are removed from the analysis, then the proportion acknowledging RAR prevention of reputational damage rises to 62.5% in this stakeholder category. The following tables (5.23 and 5.24) show any trends in relation to Org Size or country of origin, however the chi-squares indicate that the trend are not significant.

Table 5.23: Preventing reputational damage through independent certification of supplier RARs versus Country of Origin (%) (Chi-square).

H&S RAR	Countries						
	UK	Germany	Spain	France	Italy	Portugal	Romania
No	33.33	20.00	52.94	31.25	40.91	46.15	18.18
Yes	66.67	80.00	47.06	68.75	59.09	53.85	81.82
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Pearson chi2(2) = 4.9842 Pr = 0.546

Table 5.24: Preventing reputational damage through independent certification of supplier RARs versus Country of Dimension (%) (Chi-square).

Stakeholder Type	Micro (0-9 staff)	Small (10-49 staff)	Medium (50-249 staff)	High (250+ staff)
No	38.46	48.39	30.56	20.00
Yes	61.54	51.61	69.44	80.00
Total	100.00	100.00	100.00	100.00

Pearson chi2(2) = 5.8094 Pr = 0.121

Finally, the last information collected for these two stakeholder groups specifically, relates to whether they would stop buying leather from suppliers who do not provide assurances on standard tannery workplace safety (see Figure 5.23).

Figure 5.23: Would you stop buying leather from suppliers who do not provide you assurances on standard tannery workplace safety (%).

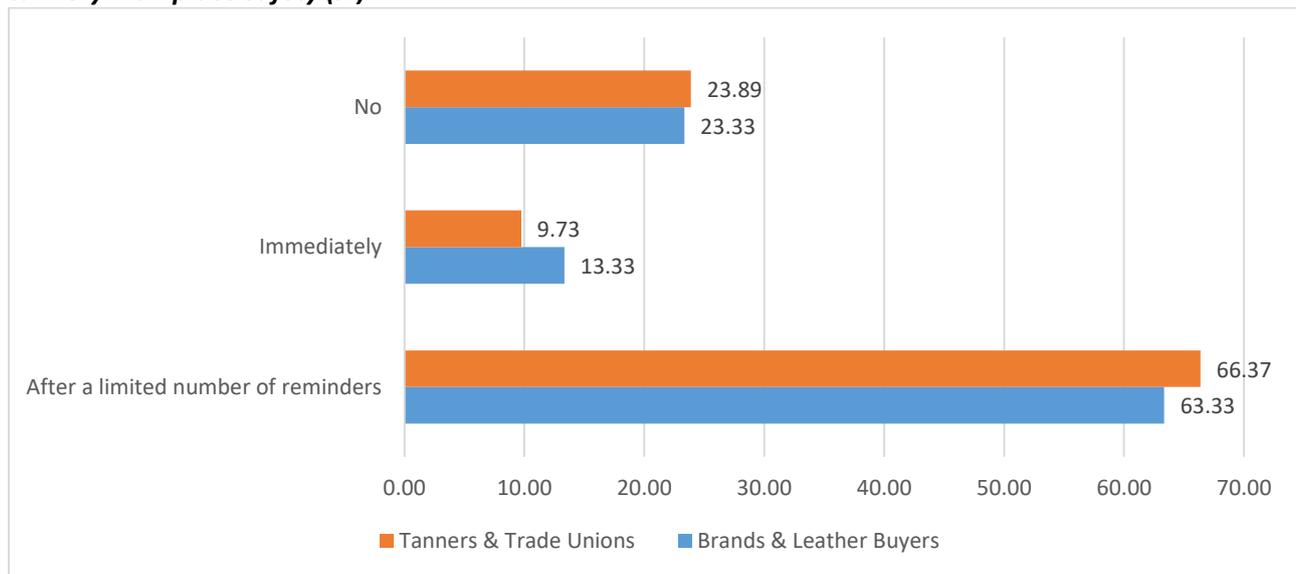


Figure 5.23 demonstrates that only a marginal number of leather buyers (tanneries or Brands and leather buyers) would stop immediately buying from suppliers that would oppose to the provision on demand of assurances on their workplace safety practices. The majority of both stakeholder groups would continue buying for a certain time, giving the supplier the opportunity to comply to the request. However, they also would stop buying leather from suppliers who would not provide assurances on standard tannery workplace safety after a limited number of reminders, with 66% of the tanneries and the 63% of the brands and leather buyers respectively stating this.

Also in this case, we investigated some of the information collected in the survey with respect to the type of stakeholder, the organisational size, and the country of origin, through regression analysis. In particular, the information identifying:

- ‘stakeholders offering information on H&S to their customers’
- ‘stakeholders in-factory training in H&S to the suppliers’
- ‘leather supplier keeping and applying a H&S RAR’
- **‘awareness of workplace safety in the tanneries’**
- **‘customers auditing of stakeholder workplaces on the safety of their production processes’**
- ‘preventing reputational damage through independent certification of supplier RARs’
- **‘Would you stop buying leather from suppliers who do not provide you assurances on standard tannery workplace safety’.**

The questions highlighted in bold above returned statistically significant relationships, which are explored below (see also Table B in the appendices). The other question areas demonstrated no significant relationships and so are not reported on here.

The perception of the ‘awareness of workplace safety in tanneries’ (Appendix B - Column 1) is significantly related to the dimension of the organisation. In particular, Large (250+ employees) organisations are more likely to be aware of workplace safety than smaller organisations. In addition, the presence of ‘customers auditing of stakeholder workplaces on the safety of their production process’ (Appendix B - Column 2) is significantly related to one of the four types of stakeholder, in particular for the ‘Brands & Leather Buyers’. In fact, this stakeholder is less likely to have ‘customer auditing of stakeholder workplaces on the safety of their production process’. Finally, the probability that organisations will ‘stop buying leather from suppliers who do not provide assurances’ (Appendix B - Column 3) is significantly related to organisational size also. In

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particular, Large (250+ employees) organisations are more likely to stop buying leather from suppliers who do not provide assurances, as opposed to their smaller counterparts. The data was also explored in relation to whether there was a relationships between 'other stakeholders' that followed the tanning sector and both nationality and organisational size¹⁴. The analysis (Chi-squared) identified no relationships here.

¹⁴ The sample-size for this Chi-squared test was n=61.

6. Summary

6.1 – Overview of Findings:

The research reported in this paper has sought to provide an overview of current practice, perceptions and knowledge of H&S in the leather supply chain, in respect to the four key stakeholder groups that operate within it (tanneries and trade unions; brands and leather buyers; tannery suppliers; and other stakeholders). In doing so it has demonstrated how value in the leather supply chain, both upstream and downstream of tanneries is valued (and implemented) by different stakeholder groups. In providing this analysis the report seeks to answer three research questions, which are detailed below. This summary will provide an overview in relation to each of these three research questions, which can be used to make recommendations for improving the adoption of H&S frameworks in the leather supply chain moving forwards. The data can also inform the development and refinement of RAR frameworks, including the European Commission's OiRA tool, by identifying how H&S is valued by different stakeholders in the leather value chain, as well as by providing indicators for how these are mediated by country of origin and organisational size.

1. How European tanneries are regulated and controlled with regard to key H&S requirements, and whether or how their own leather supply chain can be monitored?
2. How leather products manufacturers and importers set tannery workplace standards and monitor tannery workplace conditions in their supply chain?
3. How observers and other stakeholders observe and interact with the leather value chain?

In relation to the first research question, European tanneries are subject to mandatory rules on H&S in the workplace. EU legislation obliges companies to produce, keep and continuously update a Risk Assessment Report that lists all the risks faced by the workforce and provides guidance on how this risks are prevented or minimised. EU companies must also ensure that workers are informed about workplace risks and trained on avoiding them including the use of personal protective equipment. H&S legislation in Europe is driven by European Directives that the member states are legally obliged to transpose into national laws (EASHW, 2018). The EU also has the 'EU Strategic Framework on Health and Safety at Work 2014-2020' in operation, which seeks to build further on the work that has taken place in relation to H&S over the last 40 years through multi-year action programmes (more information can be found online at <https://osha.europa.eu/en/safety-and-health-legislation>)¹⁵.

Stakeholders revealed to have a very confused idea about H&S instruments. They reported that they were generally utilising or adopting ISO standards in their H&S assessments. The LWG audit was also mistakenly reported as an H&S audit protocol. In relation to the OiRA tool, the survey revealed a lack of knowledge as to its existence and applicability, whilst even amongst those stakeholders that were aware of OiRA, there was doubt on its suitability to assessing all aspects of H&S in the leather value chain. Respondents also reported that dedicated personnel was used to implement and monitor H&S obligations, while the responsibility of management and worker representatives was also acknowledged, to ensure implementation. There was also a widespread belief in the usefulness of RARs in conveying information on H&S in the leather supply chain. Finally, respondents expressed a high degree of confidence in H&S implementation in Europe and North America, but low confidence in other global regions, most notably Africa and Asia. This demonstrates the need for stakeholders from those regions to both adopt H&S RARs, but perhaps more crucially, to effectively market these where they are adopted.

In relation to the second research question, the data revealed that there was high concern for H&S amongst all of the four stakeholder groups. However, despite this concern, there was a relative lack of knowledge

¹⁵ Further information on the Framework can also be found at <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2014:332:FIN> with the English version of the Framework available online at <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014DC0332&from=EN>

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around the different H&S RAR frameworks available, and still low awareness of the OiRA tool after 5 years of its existence. In addition, a significant proportion of respondents recognised the LWG tool as a H&S RAR, even though it is not strictly speaking a recognised RAR framework. The majority of respondents instead recognised ISO and SA 8000 as the main H&S RAR frameworks. This demonstrates that within the sector there is a desire to engage in robust H&S practices, but that a lack of knowledge and awareness is limiting the uptake and implementation of H&S RARs as a communication vehicle for tannery workplace safety in the leather value chain.

In relation to the third research question the interaction between different stakeholder groups with the leather value chain also produced some interesting findings. In relation to upstream monitoring of H&S amongst suppliers, the data revealed that there were relatively low-levels of assurance sought from suppliers, along with poor auditing of supplier RARs (including low knowledge of supplier RAR policies/frameworks and their content). Specifically, whilst notably smaller tanneries were quite poor at upstream auditing, brands and leather buyers declared being much more engaged at this (perhaps due to their larger size). Conversely though, tanneries were better at sharing information with customers downstream relating to H&S practices than brands and leather buyers, but overall there was still poor transparency across stakeholder groups. This was also reflected in customer auditing of H&S RARs as well.

Finally, in developing RARs, the majority were developed in-house, especially amongst brands and leather buyers who perhaps have greater capacity to do so given their on average larger size. Tanneries and Trade Unions had poor awareness of their leather suppliers' production process H&S. For brands and leather buyers, this awareness of supplier H&S was better than in the tanneries. There was also poor awareness of supplier tannery's production H&S amongst tanneries and trade unions, whilst this was better amongst brands and leather buyers. However, there was high concordance that RARs can limit the chances of reputational damage occurring through poor H&S practices in the supply chain, demonstrating that stakeholders saw the value of engaging in H&S RAR development and implementation. There is therefore an opportunity to engage stakeholders and improve H&S in the leather supply chain moving forwards.

6.2 – Key Comparative Relationships in the Data:

The additional comparative analysis conducted in relation to the key variables within the dataset, namely: stakeholder type; organisational size; and country of origin, identifies some interesting trends. These trends were identified through Chi-squared (cross-tabulation) analysis and regression analysis, in order to explore how these three main factors mediated responses and attitudes to H&S RARs and the different dimensions of the survey. The three key findings and the sub-themes within these are presented below.

1. To be a tanner, or not to be a tanner...

- **OiRA:** Stakeholder type does not influence awareness of or adoption of OiRA, with no significant differences in tanneries and trade unions, brands and leather buyers, tannery suppliers and other stakeholders use of the tool. The lack of awareness of the OiRA tool is equal across stakeholder groups?
- **RAR Usefulness:** There are significant differences between stakeholder types in their perceived usefulness of RAR, with Brands and Leather Buyers most aware of their impact in reducing reputational risk and testifying to workplace practices related to H&S. Tanneries and Trade Unions and Tannery Suppliers also in the main see the value of a RAR, but other stakeholder types (NGOs, research centres, consultants and federations) are less likely to be convinced.
- **RAR Desire:** Tanneries communicate their H&S practices because they want to, as well as because they are asked to. It should be noted that they overwhelmingly viewed H&S as an issue of 'high priority' in the survey responses.
- **The EU 'Brand':** Brands and Leather Buyers and other stakeholder types view the EU 'brand' more importantly than Tanneries and Trade Unions and Tannery Suppliers, with the former having higher trust in EU countries.

2. Location, location, location...

- **H&S priority:** H&S as a priority is not impacted upon by a respondent's country of origin, with equally high priorities seen across the seven main respondent countries (England, Germany, Spain, Italy, France, Portugal and Romania).
- **OiRA:** Equally, country of origin does not influence the consideration of adoption of OiRA as a tool.
- **The EU 'Brand':** Respondents (across all stakeholder groups) from Spain, Italy and Romania are more likely to trust European based organisations than other countries in relation to H&S. In addition, Spain and Romania are also more likely to trust non-EU countries in Europe with regards to H&S.
- **Supply-side Assurances:** Italy and Spain have particularly high levels of assurance on H&S in their supply-chains.

3. Size matters!

- **H&S priority:** H&S as a priority is not impacted upon by a respondent's organisational size. All leather value chain stakeholders consider H&S as a high corporate priority independently of their size.
- **Workplace Safety:** Large (250+ employees) organisations are more likely to prioritise workplace safety than smaller organisations, with an almost linear trend seen between these variables.
- **Purchasing Power:** Large (250+ employees) organisations are more likely to stop buying leather from suppliers who do not provide assurances, as opposed to their smaller organisational counterparts.
- **Supply-side Assurances:** Larger organisations have a greater focus on H&S assurances in their supply chain than do smaller organisations.
- **OiRA:** Larger organisations (tanneries and leather buyers) are less likely to use the OiRA tool.

7. Further Research

To date there has not been research that has comprehensively mapped H&S in the leather supply-chain, and especially in relation to tanneries, something that this report has sought to commence. However, no research project is ever perfect and there are limitations to the dataset both in design and sample-size. On the design front, the solely quantitative nature of the research methods used (survey and statistical analysis) means that the research is unable to 'zoom in' and explore micro-level factors, or to understand the context in many places of the trends observed in the general data.

In order to develop a deeper understanding of these contextual factors, the research needs to be extended to include in-depth qualitative data capture (i.e. semi-structured interviews, focus groups, case-study development). This would allow the report to try to explain some of the idiosyncrasies in the data (and assumed in the sector) relating to H&S and RAR frameworks (some of these questions are covered below), by allowing the research to delve into the enablers and barriers to tanneries, Brands and Leather Buyers, and to a lesser degree tannery suppliers and other stakeholders in the sector, engaging in H&S RAR activities and audits. Whilst the research team and partners have sought to provide some understanding of these factors within the report (and to a greater extent in the accompanying 'glossy' report related to the research) based upon our sector specific knowledge, these remain untested assumptions. Further exploration to validate them is required.

The other limitation relates to the sample-size gathered in the research. Whilst 238 respondents remain a strong sample, and indeed in many ways exceeded the expectations of the research team, especially given the challenges inherent in identifying and engaging with leather sector stakeholders (and the limited budget/scope of the research), it does present challenges when analysis is required that seeks to separate the sample down into sub-groups. This was particularly true in this research when trying to explore all stakeholder groups other than the tanneries, and when exploring data trends for countries outside of Europe. Further quantitative research in this area needs to seek larger sample-sizes so as to be able to rigorously test the trends identified in this report.

There are therefore a number of key questions for future research to engage with, which could be answered through both qualitative and quantitative data gathering methods. In summary, the research has identified five areas for further research to engage with:

- 1. Strategic versus Operational Engagement:** The research has identified that H&S is viewed through the leather supply-chain as an area of high priority. However, there remains a dichotomy between this perceived priority at a strategic level and operationalised efforts to utilise H&S RARs. Indeed, given the high priority stated within the survey, there remains a clear lack of knowledge of RAR frameworks and their use is not widespread. Indeed, the use of non-leather specific frameworks is further evidence of this. Research that explored why this barrier to operationalising RARs exists despite the strategic buy-in around H&S would be welcome.
- 2. Organisational Size:** The research has clearly identified that organisational size is a major predictor of engagement with RAR frameworks and their use in the supply-chain (and particularly upstream). Whilst it is posited that this is due to the greater capacity and possible internal departments devoted to H&S in larger organisations, this cannot be categorically evidence. Research that explores this relationship and seeks to explain what enables the uptake of RAR frameworks in different-sized organisations would answer this.
- 3. Geography:** The issue of where supplies for tanneries and Brands and Leather Buyers come from could be an important factor in determining RAR use. Indeed, the use of RAR frameworks for suppliers based outside of Europe and North America might be higher, as trust in other regions related to H&S compliance (as evidenced in this report) remains low. Research that mapped how the geography of suppliers (and customers) affected the use of H&S RAR frameworks (and indeed the type of assurance sought) could evidence this trend more robustly.

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- 4. RAR Framework Knowledge:** The research has clearly identified a lack of knowledge around RAR frameworks in the leather sector, with respondents being largely unaware of OiRA, demonstrating a lack of awareness of RAR frameworks being non-leather specific frameworks (ISO, SA 8000), and also being unaware that others (LWG) are not actually H&S RAR frameworks. Research to understand how these barriers to knowledge (and hence effective implementation of RAR frameworks) emerge could help in the marketing and adoption of tools like OiRA.
- 5. Stakeholder Diversity:** The research reported here has grouped the sector into 4 main stakeholder groups (Tanneries; Brands and Leather Buyers; Tannery Suppliers; and Other Stakeholders). However, we acknowledged earlier in the report that we recognise significant diversity within these four main groups and that many stakeholder sub-types exist. Unfortunately, the sample-size obtained in this research has been insufficient to conduct any meaningful research into the differing experiences of these sub-types in adopting RARs (and how they relate to each other). Research that explored experiences of these differing sub-groups (perhaps through case-studies) could be enlightening in demonstrating how H&S RAR adoption can be pushed across the sector in a heterogeneous way.

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Appendices

Table A: regression of the ‘the use of the Online Interactive Risk-Assessment’, and the ‘perception of the level of enforcement of H&S standards for EU, non EU, and Oceania’ with respect to the type of stakeholder, the organisational size, and the country of origin, through regression.

Independent variables	Dependent variables			
	Use of the Online Interactive Risk-Assessment	EU	non Europe	Oceania
Tanners & Trade Unions	0 (.)	0 (.)	0 (.)	0 (.)
Brands & Leather Buyers	-0.0424 (-0.08)	0.160 (0.31)	-0.811* (-2.01)	-0.305 (-0.83)
Tannery Suppliers	-2.541 (-0.01)	-1.659 (-1.71)	-0.455 (-0.32)	.430 (1.47)
Other stakeholders	-0.0949 (-0.25)	-0.253 (-0.70)	-0.651* (-1.98)	-0.221 (-0.77)
Micro (up to 10 employees)	0 (.)	0 (.)	0 (.)	0 (.)
Small (11-49 employees)	-0.437 (-1.19)	0.116 (0.31)	-0.715* (-2.07)	-0.737* (-2.39)
Medium (50-249 employees)	-0.972* (-2.38)	-0.0626 (-0.17)	-0.196 (-0.57)	-0.804* (-2.51)
Large (250+ employees)	-1.368* (-2.36)	0.779 (1.58)	0.243 (0.62)	-0.0955 (-0.27)
UK	0 (.)	0 (.)	0 (.)	0 (.)
Germany	0.246 (0.45)	0.547 (1.26)	0.819 (1.78)	0.0289 (0.06)
Spain	-0.215 (-0.38)	1.662** (2.94)	1.651*** (3.73)	0.347 (0.83)
France	0.858 (1.67)	0.785 (1.76)	0.728 (1.67)	-0.117 (-0.28)
Italy	-0.719 (-1.14)	1.422** (2.98)	0.773 (1.94)	0.410 (1.06)
Portugal	1.016 (1.80)	-0.116 (-0.24)	0.628 (1.21)	-0.0769 (-0.15)
Romania	0.105 (0.19)	0.923* (2.04)	1.370** (2.99)	-0.121 (-0.29)
Observations	161	148	137	124

t statistics in parentheses

* p < 0.05, ** p < 0.01, *** p < 0.001

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Table B: regression of the ‘awareness of workplace safety in the tanneries’, ‘customers auditing of stakeholder workplaces on the safety of their production processes’, ‘Would you stop buying leather from suppliers who do not provide you assurances on standard tannery workplace safety’ since these are the ones for which we obtained significant results.

Dependent variables	Independent variables		
	Awareness of workplace safety in the tanneries	Customers auditing workplaces on safety of production processes	Stop buying leather from suppliers who do not provide assurances
Tanners & Trade Unions	0 (.)	0 (.)	0 (.)
Brands & Leather Buyers	-0.470 (-1.24)	-1.037** (-2.68)	-0.264 (-0.69)
Micro (up to 10 employees)	0 (.)	0 (.)	0 (.)
Small (11-49 employees)	0.287 (0.75)	-0.196 (-0.54)	-0.301 (-0.83)
Medium (50-249 employees)	-0.274 (-0.69)	0.464 (1.28)	0.362 (0.99)
Large (250+ employees)	1.268** (2.69)	0.438 (1.00)	1.134* (2.49)
UK	0 (.)	0 (.)	0 (.)
Germany	-0.691 (-1.17)	0.0780 (0.16)	0.392 (0.77)
Spain	0.281 (0.63)	0.150 (0.32)	0.0793 (0.17)
France	-0.206 (-0.45)	0.00413 (0.01)	0.906 (1.93)
Italy	-0.227 (-0.53)	-0.122 (-0.27)	0.562 (1.23)
Portugal	-0.826 (-1.71)	-0.262 (-0.53)	0.311 (0.62)
Romania	1.370* (2.40)	0.467 (0.87)	0.939 (1.74)
Observations	96	119	119

t statistics in parentheses

* p < 0.05, ** p < 0.01, *** p < 0.001