APPENDIX 2

Survey activities

The Industry survey was designed to work in the 3 sub-sectors; tanneries, footwear manufacturers and testing laboratories to build-up a profile of the industry today. The parameters under examination were set as:

- Size of company
- Current export activities by %, according to geographic region
- Level of product testing in-house
  - ✓ By external independent service provider (laboratory)
  - ✓ By the customer
- What level of testing is done on their product
- What sort of materials they have tested (especially in shoe factories)
- How long testing takes (labs)
- Level of testing equipment available (labs)
- What level of analysis can they undertake (labs)
- The capacity of testing capability (labs)
- Are there any ISO accreditations in force (such as 9000 / 14000 / 17025)

By aggregating the raw data for each sub-sector and pulling out the baseline, trends and influences, the team will create the snapshot of current technical abilities and capacity and then be able to formulate a view on how far that might be away from the ability to comply with REACH. This will be the foundation of assessing the information gap that exits and the training requirement.

Analysis of the data is provided in the form of Bar Charts for easy assimilation.

A. *Footwear Industry Testing Survey*

EU - TBT Removal of Technical Barriers to Trade

FOOTWEAR INDUSTRY TESTING SURVEY

Section B - for footwear manufacturers

How many people does your company employ?

(insert "1" in the most relevant box below)

a	b	c	d	e	f
<10	11-20	21-40	41-70	71-100	>100

Which type of soling matrerials are used in your products?

(insert "1" in all that apply)

a	Leather		
b	Textile		
c	Synthetic		
d	Other		Please sepecify

Which type of upper matrerials are used in your products?

(insert "1" in all that apply)

a	Leather		
b	PVC		
c	PU		
d	Rubber		
e	EVA		
f	Other		Please sepecify

What is the current export profile of your business?

export to Europe (directly)

(insert "1" in the most relevant box below)

a	b	c	d	e	f
none	up to 10 %	10 - 25%	26-50%	51- 75%	>75%

export to Europe (indirectly - through a customer in another region)

(insert "1" in the most relevant box below)

a	b	c	d	e	f
none	up to 10 %	10 - 25%	26-50%	51- 75%	>75%

export to the Americas

(insert "1" in the most relevant box below)

a	b	c	d	e	f
none	up to 10 %	10 - 25%	26-50%	51- 75%	>75%

export to Asia

(insert "1" in the most relevant box below)

a	b	c	d	e	f
none	up to 10 %	10 - 25%	26-50%	51- 75%	>75%

export to African region countries

(insert "1" in the most relevant box below)

a	b	c	d	e	f
none	up to 10 %	10 - 25%	26-50%	51- 75%	>75%

What proportion of your incoming orders are accompanied by a defined performance specification?

(insert "1" in the most relevant box below)

a	b	c	d	e	f
none	up to 10 %	10 - 25%	26-50%	51- 75%	>75%

How would you describe your company's approach to product testing?

(insert "1" in the most relevant box below)

a	we don't do any product testing in-house	
b	some of our products are tested externally by the customer	
c	some of our products are tested by ourselves using outsourced facilities prior to shiping	
d	we do limited physical but no chemical testing in-house	
e	we do comprehensive physical and some chemical testing in-house	
f	all of our products are tested against the customer's specicifation prior to shiping	

Our in-house testing facilities include:

(respond with a "1" in either yes or no column)

	YES	NO
basic fundamental physical tests (rub-fastness, finish adhesion, finish flexing, tear strength and grain-burst)		
Fundamental chemistry checks (chrome content, grease content)		
more involved physical testing (water resistance, WVP- breathability, fastness testsing for water, solvent, perspiration exposure to UV light)		
Wet chemistry allowing a range of gravimetric and volumetric analysis of the product		
Ability to perform environmental testing to monitor our own effluent treatment section (BOD5, COD, SS, TDS,TKN and metals		
High-level analytical equipment (DSC / HPLC / GC-MS and spectrophotometry)		
Working in a temperature and humidity-controlled laboratory space		
Acreditation of our laboratory faclilties to ISO 17025		

Additional comments:

B. *Laboratory Testing Survey*

EU - TBT Removal of Technical Barriers to Trade

LABORATORY TESTING SURVEY

Section B - for third party testing laboratory

How many people does your company employ?

(insert "1" in the most relevant box below)

a	b	c	d	e	f
<10	11-20	21-40	41-70	71-100	>100

Which type matrerials are tested in your laboratory?

(insert "1" in all that apply)

a	Leather		
b	Textile		
b	PVC		
c	PU		
d	Rubber		
e	EVA		
f	Metal components		
g	Wood		
h	Whole Footwear		
i	Leathergoods		Please sepecify
j	Other		Please sepecify

What proportion of your testing is associated with the presence of harmful substances?

a	b	c	d	e	f
none	up to 10 %	10 - 25%	26-50%	51- 75%	>75%

Which testing methodologies are available in your laboratory?

(insert 1 in all that apply, in the second column indicate whether the methods using this technique are included in your ISO17025 accreditation)

		Available	Accredited
a	GC-MS		
b	HPLC		
C	LC-MS		
d	UV/Vis		
e	FTIR		
f	ICP		
g	ICP-MS		
h	AAS		
i	material characterisation		
j	Other		

Please specify:

What proportion of your testing work is against a defined performance

(insert "1" in the most relevant box below)

a	b	c	d	e	f
none	up to 10 %	10 - 25%	26-50%	51- 75%	>75%

Describe your company's approach to product testing?

(insert "1" in the most relevant box below)

a	we carry out the tests that the customer requests	
b	The customer provides a testing specification and we advise	
c	The customer relies on us to provide advice on the testing to	

What is the primary purpose of the physical testing carried out in the laboratory?

a	Quality tests only		
b	Safety critical tests only		
c	Combination of quality and safety critical tests		
d	Troubleshooting		

What would be the quoted turnaround time for a single physical test on one material ?

(insert "1" in the most relevant box below)

a	3 working day	
b	5 working days	
c	two weeks	
d	three weeks	
e	four or more weeks	

What would be the quoted turnaround time for a suite of physical tests on one material or product ?
(insert "1" in the most relevant box below)

a	3 working day	
b	5 working days	
c	two weeks	
d	three weeks	
e	four or more weeks	

What would be the quoted turnaround time for a suite of chemical tests on one material ?(PCP, Azo dyes, Chrome VI, Formaldehyde, organotins)

(insert "1" in the most relevant box below)

a	3 working day	
b	5 working days	
c	two weeks	
d	three weeks	
e	four or more weeks	

Additional comments:

C. *Leather Industry Testing Survey*

EU - TBT Removal of Technical Barriers to Trade

LEATHER INDUSTRY TESTING SURVEY

Section A - for tanneries and leather producers

How many people does your company employ?

(insert "1" in the most relevant box below)

a	b	c	d	e	f
<10	11-20	21-40	41-70	71-100	>100

Which type of raw matrerial is regularly worked in you factory?

(insert "1" in the most relevant box below)

a	ovine (sheep)	
b	caprine (goat)	
c	bovine (cow)	

What is your average monthly output (square feet of leather produced)?

What is the current export profile of your business?

export to Europe (directly)

(insert "1" in the most relevant box below)

a	b	c	d	e	f
none	up to 10 %	10 - 25%	26-50%	51 - 75%	>75%

export to Europe (indirectly - through a customer in another region)

(insert "1" in the most relevant box below)

a	b	c	d	e	f
none	up to 10 %	10 - 25%	26-50%	51- 75%	>75%

export to the Americas

(insert "1" in the most relevant box below)

a	b	c	d	e	f
none	up to 10 %	10 - 25%	26-50%	51- 75%	>75%

export to Asia

(insert "1" in the most relevant box below)

a	b	c	d	e	f
none	up to 10 %	10 - 25%	26-50%	51- 75%	>75%

export to African region countries

(insert "1" in the most relevant box below)

a	b	c	d	e	f
none	up to 10 %	10 - 25%	26-50%	51- 75%	>75%

What proportion of your incoming orders are accompanied by a defined performance specification?

(insert "1" in the most relevant box below)

a	b	c	d	e	f
none	up to 10 %	10 - 25%	26-50%	51- 75%	>75%

How would you describe your company's approach to product testing?

(insert "1" in the most relevant box below)

a	we don't do any product testing in-	
b	some of our products are tested	
c	some of our products are tested by	
d	we do limited physical but no chemical	
e	we do comprehensive physical and	
f	all of our products are tested against the	

Our in-house testing facilities include:

(respond with a "1" in either yes or no column)

	YES	NO
basic fundamental physical tests (rub-		
Fundamental chemistry checks (chrome		
more involved physical testing (water		
Wet chemistry allowing a range of		
Ability to perform environmental		
High-level analytical equipment (DSC /		
Working in a temperature and humidity-		
Acreditation of our laboratory faclilties		

Additional comments:

EU - TBT Removal of Technical Barriers to Trade

LEATHER INDUSTRY TESTING SURVEY

Section A - for tanneries and leather producers

How many people does your company employ?

(insert "1" in the most relevant box below)

a	b	c	d	e	f
<10	11-20	21-40	41-70	71-100	>100

Which type of raw matrerial is regularly worked in you factory?

(insert "1" in the most relevant box below)

a	ovine (sheep)	
b	caprine (goat)	
c	bovine (cow)	

What is your average monthly output (square feet of leather produced)?

What is the current export profile of your business?

export to Europe (directly)

(insert "1" in the most relevant box below)

a	b	c	d	e	f
none	up to 10 %	10 - 25%	26-50%	51- 75%	>75%

export to Europe (indirectly - through a customer in another region)

(insert "1" in the most relevant box below)

a	b	c	d	e	f
none	up to 10 %	10 - 25%	26-50%	51- 75%	>75%

export to the Americas

(insert "1" in the most relevant box below)

a	b	c	d	e	f
none	up to 10 %	10 - 25%	26-50%	51- 75%	>75%

export to Asia

(insert "1" in the most relevant box below)

a	b	c	d	e	f
none	up to 10 %	10 - 25%	26-50%	51- 75%	>75%

export to African region countries

(insert "1" in the most relevant box below)

a	b	c	d	e	f
none	up to 10 %	10 - 25%	26-50%	51- 75%	>75%

What proportion of your incoming orders are accompanied by a defined performance specification?

(insert "1" in the most relevant box below)

a	b	c	d	e	f
none	up to 10 %	10 - 25%	26-50%	51- 75%	>75%

How would you describe your company's approach to product testing?

(insert "1" in the most relevant box below)

a	we don't do any product testing in-	
b	some of our products are tested	
c	some of our products are tested by	
d	we do limited physical but no chemical	
e	we do comprehensive physical and	
f	all of our products are tested against the	

Our in-house testing facilities include:

(respond with a "1" in either yes or no column)

	YES	NO
basic fundamental physical tests (rub-		
Fundamental chemistry checks (chrome		
more involved physical testing (water		
Wet chemistry allowing a range of		
Ability to perform environmental		
High-level analytical equipment (DSC /		
Working in a temperature and humidity-		
Acreditation of our laboratory faclilties		

Additional comments:

D. *List of Organisatios Contacted*

Ethiopia Survey Schedule

No.	Organization	Location	Survey Date
1.	Leather Industry Development Institute (Lab Testing Directorate)	Addis Ababa	31, October, 16
2.	ESA- Ethiopian Standard Agency/ECA-Ethiopian Conformity Assesment Agency	Addis Ababa	01, October, 16
3.	Ethiopia tannery	Mojo (Oromia)	02, November, 16
4.	Kolba tannery	Mojo (Oromia)	02, November, 16
5.	Gelan tannery	Mojo (Oromia)	02, November, 16
6.	East Africa tannery	Mojo (Oromia)	02, November, 16
7.	Mojo tannery	Mojo (Oromia)	02, November, 16
8.	Friendship tannery	Mojo (Oromia)	03, November, 16
9.	Farida tannery	Mojo (Oromia)	03, November, 16
10.	Vasen United tannery	Mojo (Oromia)	03, November, 16
11.	Bale tannery	Debrezeit (Oromia)	03, November, 16
12.	Hora tannery	Debrezeit (Oromia)	03, November, 16
13.	Ethio-leather industry	Addis Ababa	04, November, 16
14.	Dire tannery	Addis Ababa	04, November, 16
15.	Walia tannery	Addis Ababa	04, November, 16
16.	Batu factory	Addis Ababa	04, November, 16
17.	Addis Ababa tannery	Addis Ababa	04, November, 16
18.	China Africa tannery	Sululata (Oromia)	05, November, 16
19.	Debreberhan tannery	Debre-Berhan (Amhara)	05, November, 16
20.	Hafde tannery	Sebeta (Oromia)	05, November, 16
21.	Blu-Nile tannery	Sebeta (Oromia)	05, November, 16
22.	Komoblcha tannery	Komoblcha (Amhara)	05, November, 16
23.	Sheba tannery	Wukro (Tigray)	05, November, 16
24.	Bahirdar tannery	Bahirdar (Amhara	06, November, 16
25.	Habesha tannery	Bahirdar (Amhara	06, November, 16
26.	Huajian Shoe factory	Dukem (Oromia)	06, November, 16
27.	Jorge shoe factory	Addis Ababa	06, November, 16
28.	New wing Addis shoe factory	Addis Ababa	06, November, 16
29.	Anbessa shoe factory	Addis Ababa	07, November, 16
30.	Peacock shoe factory	Addis Ababa	07, November, 16
31.	Tikur-Abay shoe factory	Addis Ababa	07, November, 16

No.	Organization	Location	Survey Date
32.	Bostex shoe factory	Addis Ababa	07, November, 16
33.	Ramsay shoe factory	Addis Ababa	07, November, 16
34.	Jamaica shoe factory	Addis Ababa	07, November, 16
35.	Kangaroo shoe factory	Addis Ababa	08, November, 16
36.	Ras-Dashen shoe factory	Addis Ababa	08, November, 16
37.	Walia shoe factory	Addis Ababa	08, November, 16
38.	Sheba shoe factory	Wukro (Tigrai)	08, November, 16
39.	Duka Shoe factory	Addis Ababa	08, November, 16
40.	Ethio - International Footwear Cluster	Addis Ababa	08, November, 16
41.	Pittards Products Manufacturing S.C	Addis Ababa, saris	09, November, 16
42.	Oto Keseler Glove Ethiopia plc	Gondor	09, November, 16
43.	Hiroki Addis Manufacturing	Addis Ababa, alem gena	09, November, 16
44.	Dave Impex Enterprise	Bahir Dar	09, November, 16
45.	ELICO	saris abo	09, November, 16
46.	Universal leather products (ELICO)	Addis Ababa, saris	09, November, 16
47.	Modern Zege leather industries PLC	Addis Ababa,kality gebriel	09, November, 16
48.	Girum Leather enterprise	Addis Ababa, sidist kilo	09, November, 16

Sudan Survey Schedule

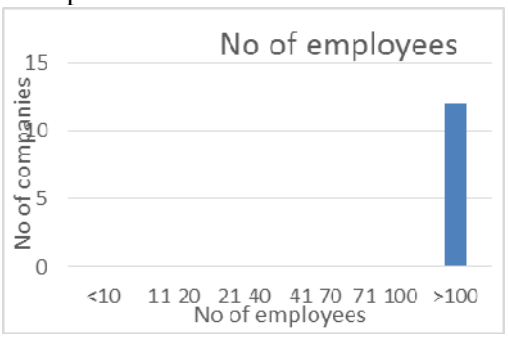
FOOTWEAR:
• *Saria industrial complex factory - shoe factory*
• *European shoe* factory
• T Shoes (Diabetic Shoes)
• Summit Shoes
• ROWA MATEN FOR SHOES
• Alex (Diabetic Shoes)
• Badr Association (complex)
• Eltaj yaseen
Tannery:
• Khartoum tannery
• Whit Nile Company
• AFRICAN LEATHER FACTORY
• Samara TANNERY
• Afro leather factory
• ALPHA & BETA TANNER
LABORATORY:
• National leather Technology Center

Survey Results

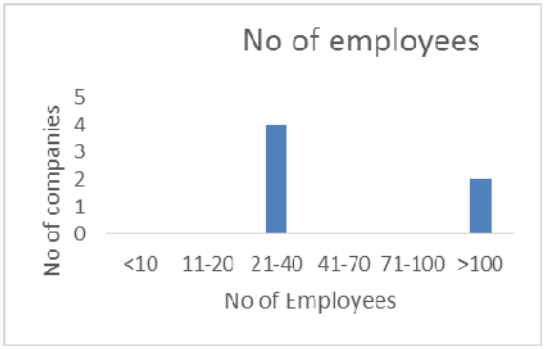
Survey report
Comparison of tannery data collected

Size of Company

Ethiopia



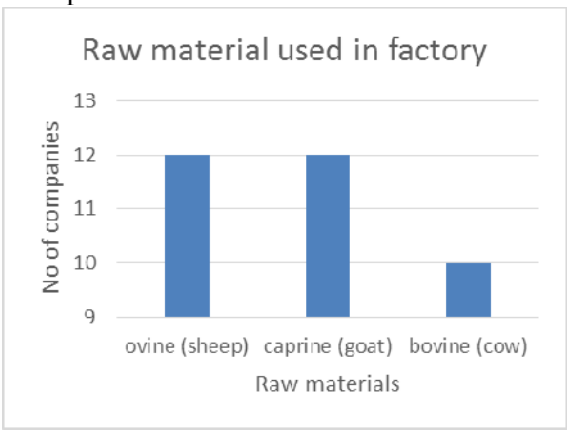
Sudan



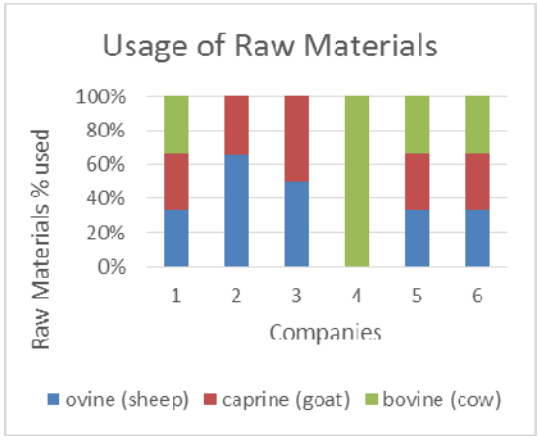
The majority of Sudanese tanning companies work with less than 40 people. Ethiopian companies are much larger – reflected in their regular volumes of business. It was expected to see a significant difference in this parameter.

Leather "families" Produced

Ethiopia



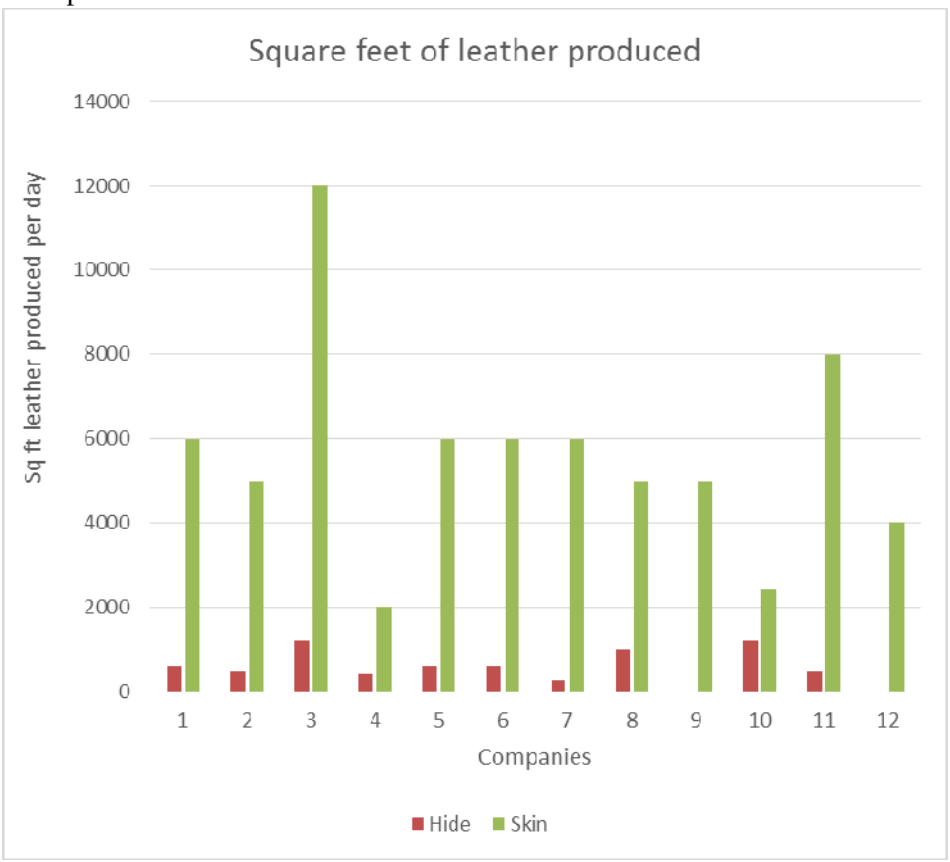
Sudan



Ethiopian companies are focused primarily on small skins production, which is no surprise, given the poor general quality of raw material resulting from the bad general practice in husbandry and abattoir practices. Sudan has a more buoyant bovine sector and 4 companies out of 6 surveyed produce significant proportions of their output from bovine sources – one company even specialises in just bovine leather.

Typical Production Volumes

Ethiopia



Sudan

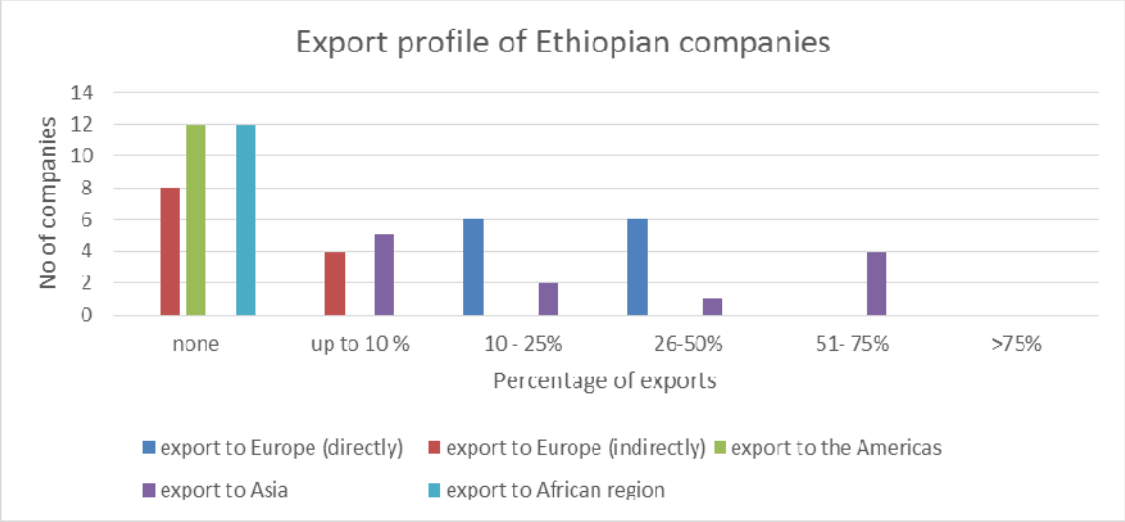
Reports of **regular** production volumes for companies across the survey were not available, due to the general low-level of activity in the Industry - caused by the depressed nature of business. It has not been possible to collect and produce comparative evidence on this parameter as a result.

Ethiopian leather industry majors on leather from small skin production. The bovine leather segment is very low-volume by comparison, this is largely due to the very poor quality level of available hides.

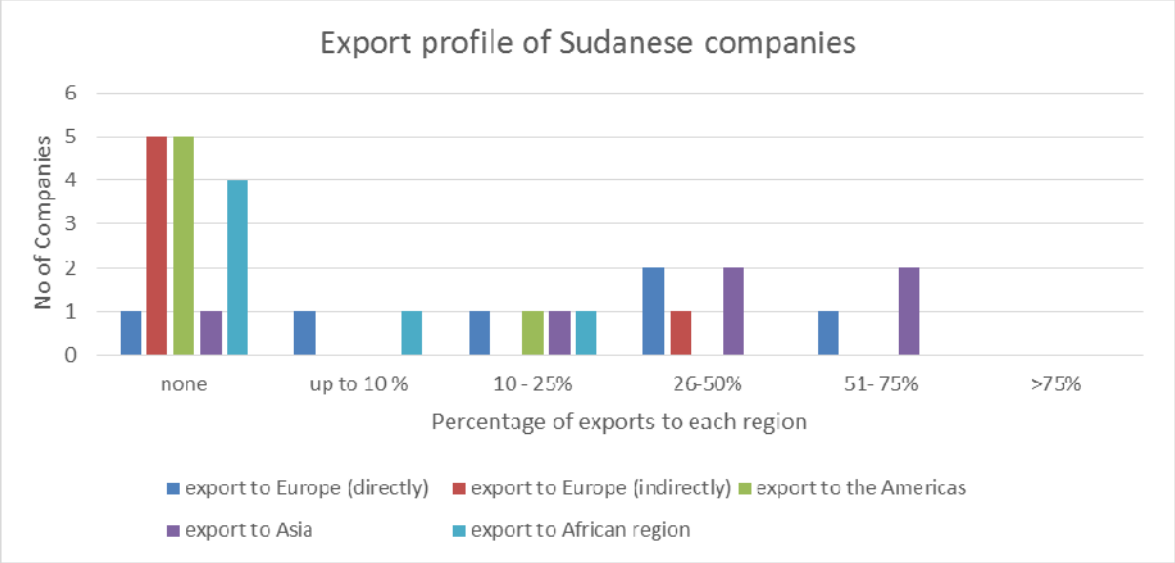
With access to massive quantities of raw material in Sudan – some of the largest herds in Africa, it is sad to see the industry struggling at such low levels of activity. The observation that has to be made is that it is probably due to the level of international economic sanctions that had been in force for over 20 years. We understand that these have now been relaxed, so would expect a less austere time to come for the industry.

Exporting of Product by Destination

Ethiopia



Sudan

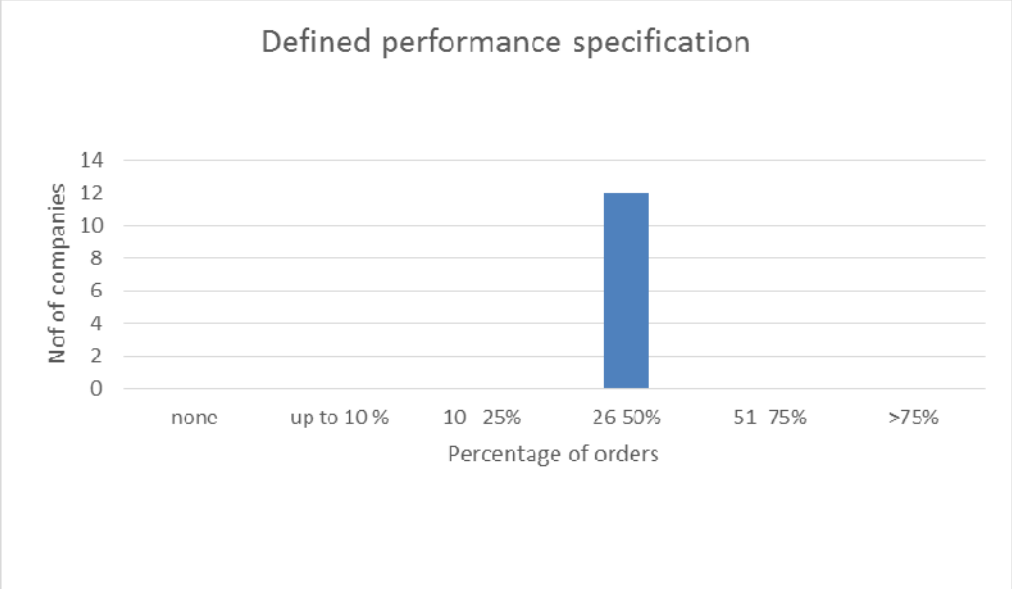


Direct exporting to EU / EEA is not evident in the current activities of the producers. The project can only serve to help with defining the route to improving this. Small evidence exists of indirect European business, but working through intermediaries will always depress prices and leave producers open to exploitation from quality claims etc. From Sudan, export of part-processed "commodity" product such as wet blue continues – indicated as direct EU business. In Ethiopia export of non-value-added product is discouraged by high export tariffs. This pushes the industry in the direction of finished leather production, but the understanding and development of this is still low-level against international best practice. Hence, producers are not able to reach the more lucrative markets that would help make a real difference to foreign trade figures and contribute to strong companies in the field. The journey has started, but the destination is very distant.

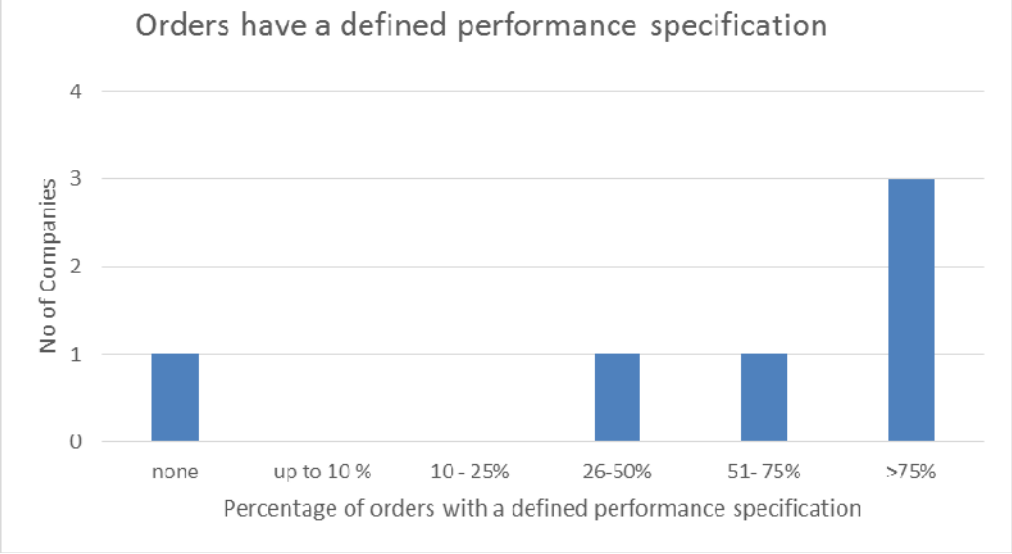

TBT PROGRAMME
OVERCOMING TECHNICAL BARRIERS TO TRADE

Proportion of CLEARLY DEFINED orders in-coming

Ethiopia



Sudan

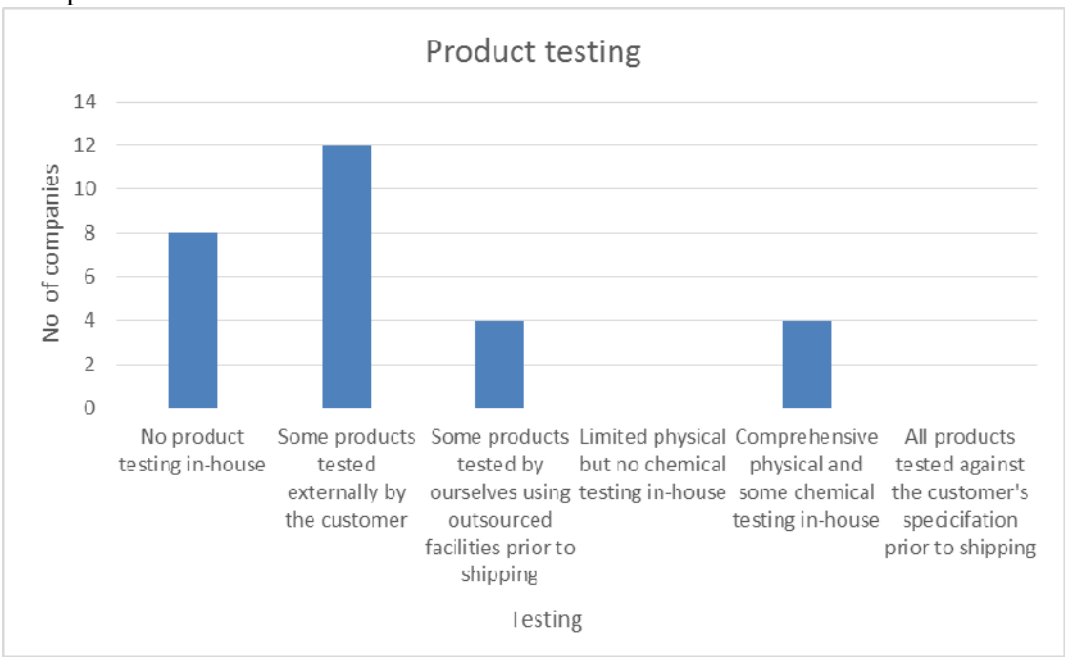


Somewhat less than half of the tanneries in Ethiopia are working to produce a defined standard of product by working to a customer specification, whereas in Sudan, half the industry is receiving clear specifications for greater than 75% of the production. Not having clear performance specifications from the customer almost guarantees production of low-performance product which will only ever attract a low sales value. Producers do not know the workings of their process sufficiently well to be able to engineer particular attributes of performance into a product. The risk is that they are over-engineering and wasting money on chemicals and activities that don't actually need to be done. They need to start to demand

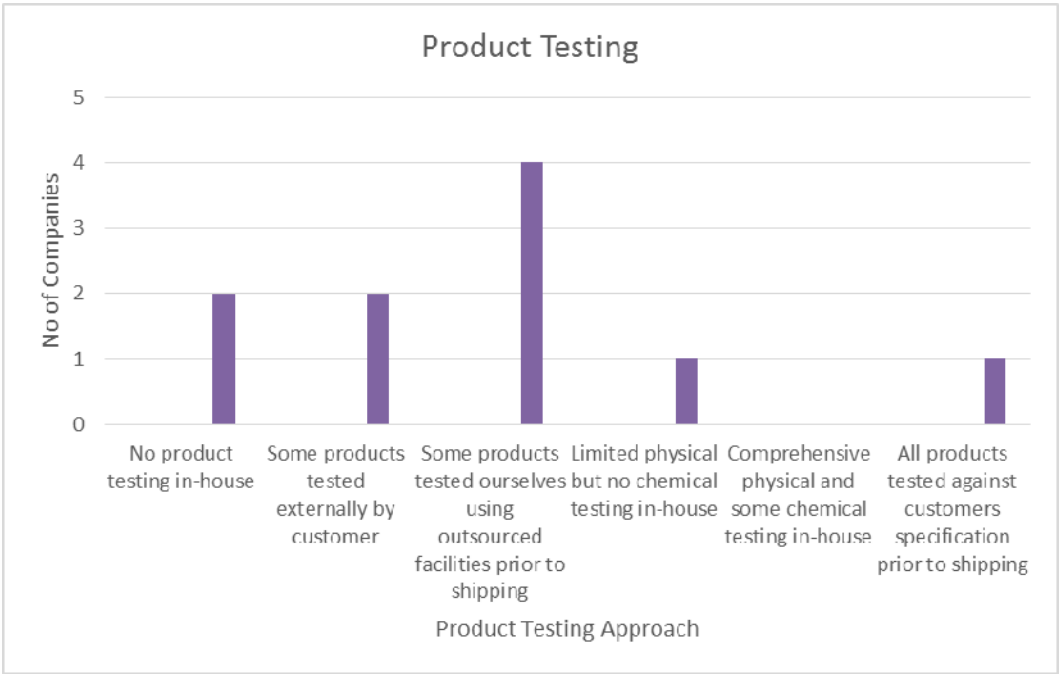
proper specifications from their customers, so that they can demonstrate fitness for purpose. It is only possible to engineer a product by measuring the critical aspects of it. Once they can prove that they can reach and even beat the target on a regular basis, this builds customer confidence and can result in better unit revenue – underpinned by product consistency and regular service.

Producer's Approach to Product Testing

Ethiopia



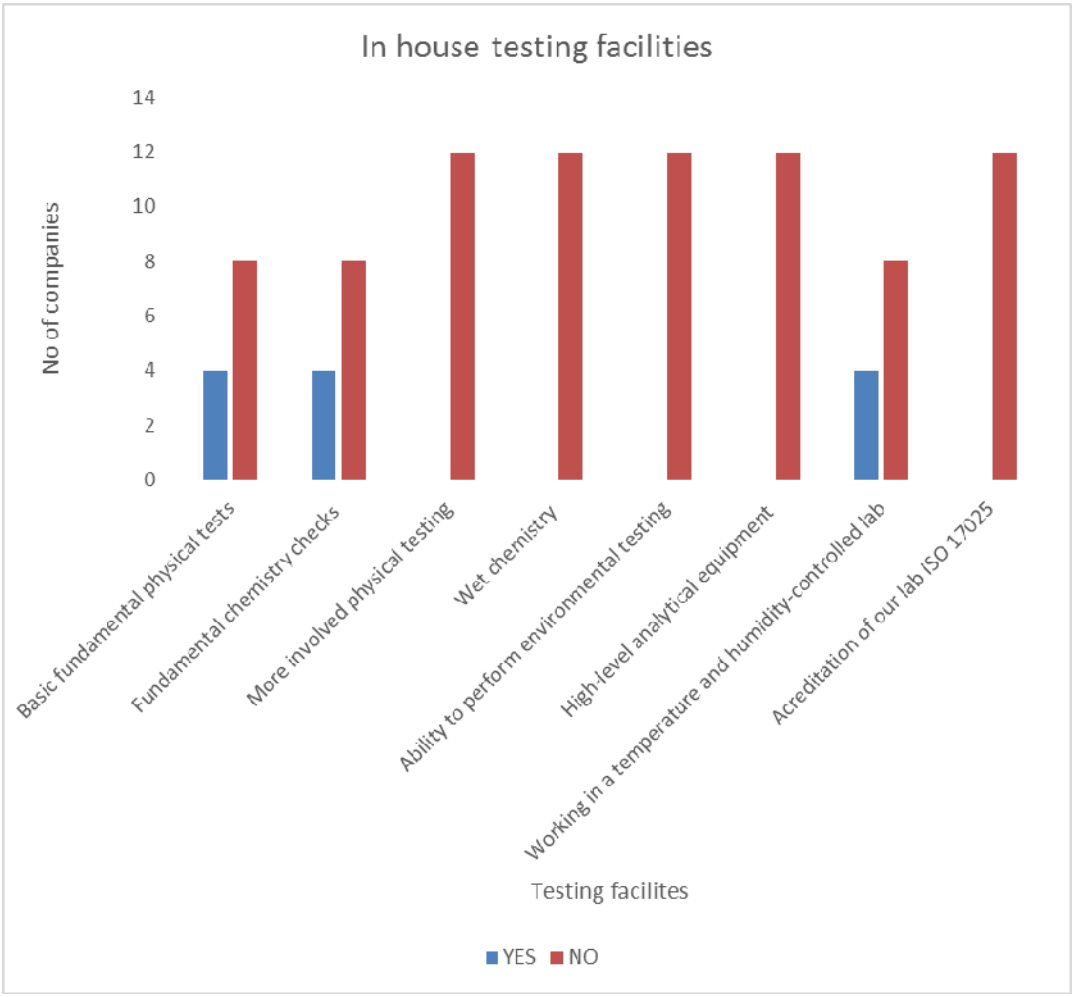
Sudan



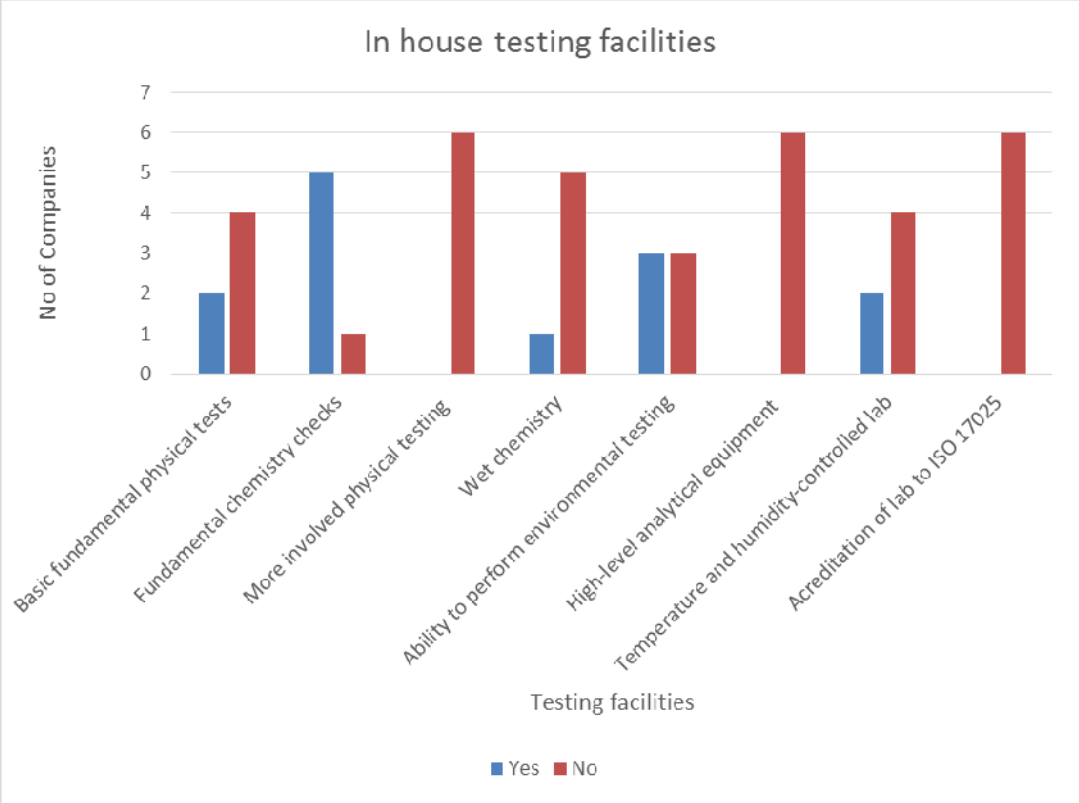
In Ethiopia, two-thirds of the industry does no product testing and no company has a full and comprehensive QA / QC approach. There is a heavy reliance on external testing, mostly by the customer but minimally by independent laboratory.
In Sudan, most of the testing is in an independent lab, with half the volume of testing done by the customer. One company has a full and complete approach to QA / QC principles

On-Site Testing Capabilities

Ethiopia


In house testing facilities
No of companies
14
12
10
8
6
4
2
0
Basic fundamental physical tests
Fundamental chemistry checks
More involved physical testing
Wet chemistry
Ability to perform environmental testing
High-level analytical equipment
Working in a temperature and humidity-controlled lab
Acreditation of our lab ISO 17025
Testing facilites
YES
NO

Sudan

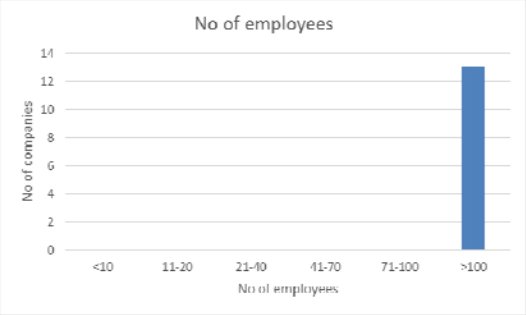


In Sudan, half the industry claims to be able to perform environmental tests. In Ethiopia, this is not evident at all. The level of environmental stewardship in both countries was observed as basic at best with only very few factories taking any care of process outflows. This situation will not help producers to develop export business to Europe or anywhere else. High-level clients demand demonstrable levels of clean ethics from their suppliers, given that the industry has had a very bad reputation for pollution. In Ethiopia only the very basic tests are provided-for in tannery in-house facilities. In Sudan, the claim is a little more high-level with some chemical analyses taking place. In Ethiopia, a third of the industry claims to be working in a controlled laboratory environment, we did not witness significant evidence of this on team visits to the industrialists. General impression from the graphs would lead to the impression that Sudan factories were more advanced than Ethiopian ones. Actual observations do not agree with this. Even if full compliance with REACH legislation can be achieved, other and more basic aspects of demonstrating fitness for purpose of a product will hold-back any potential for progress.

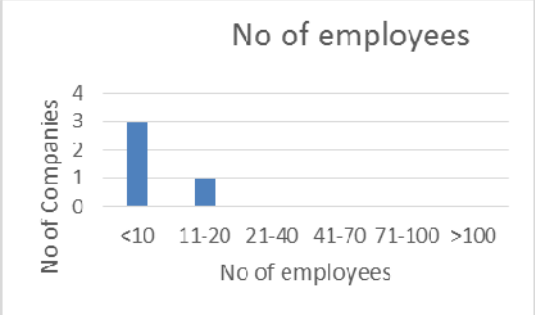
Comparison of footwear factory data collected

Size of Company

Ethiopia



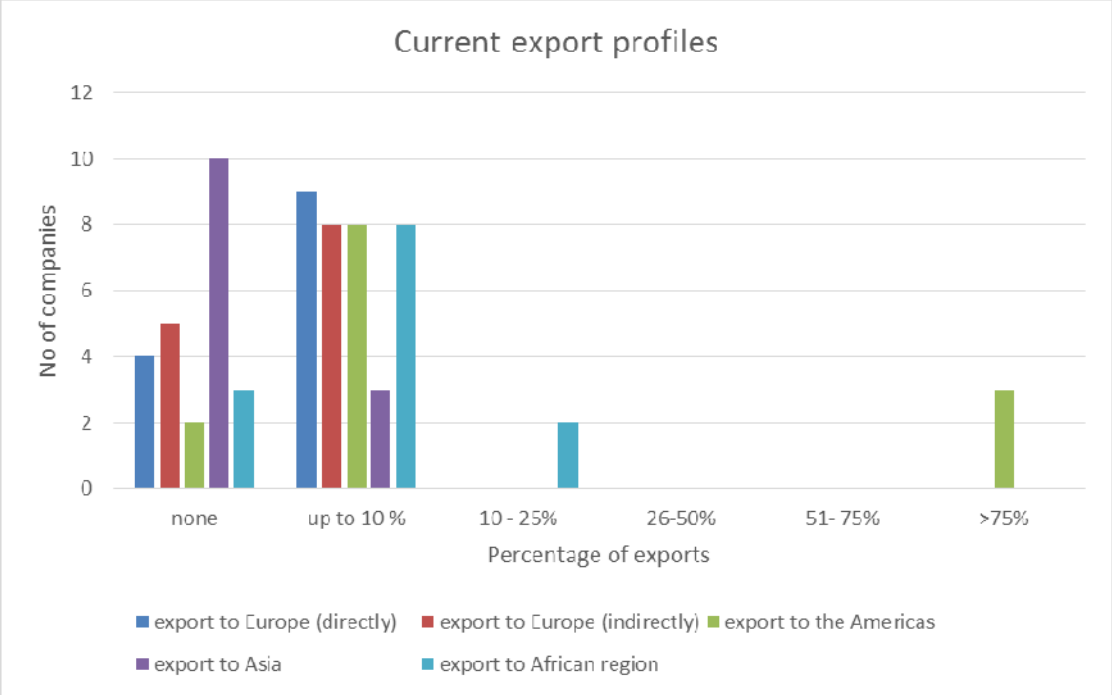
Sudan



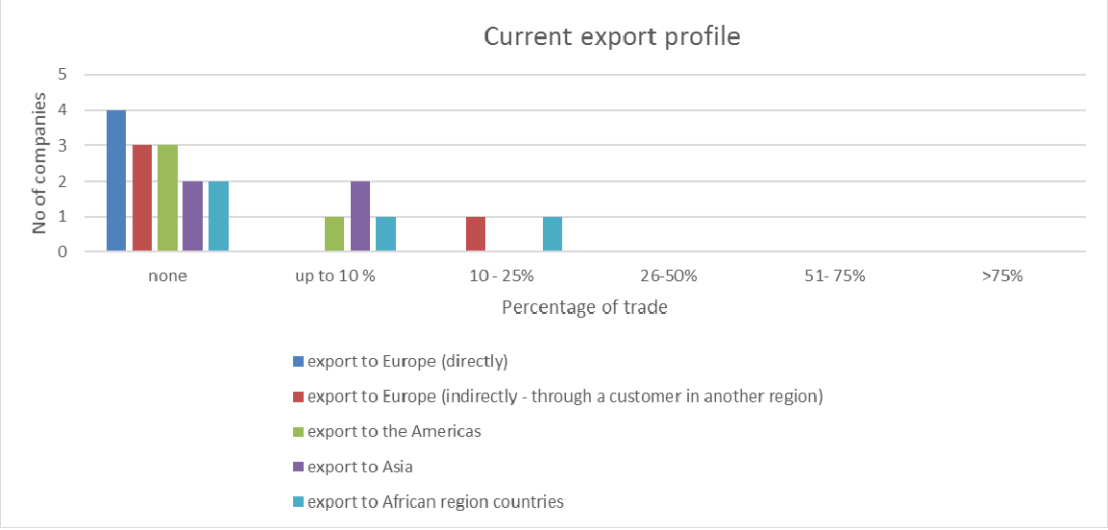
All of Sudanese footwear factories surveyed work with less than 20 people. Ethiopian companies are much larger – reflected in their regular volumes of business. It was expected to see a significant difference in this parameter.

Exporting of Product by Destination

Ethiopia



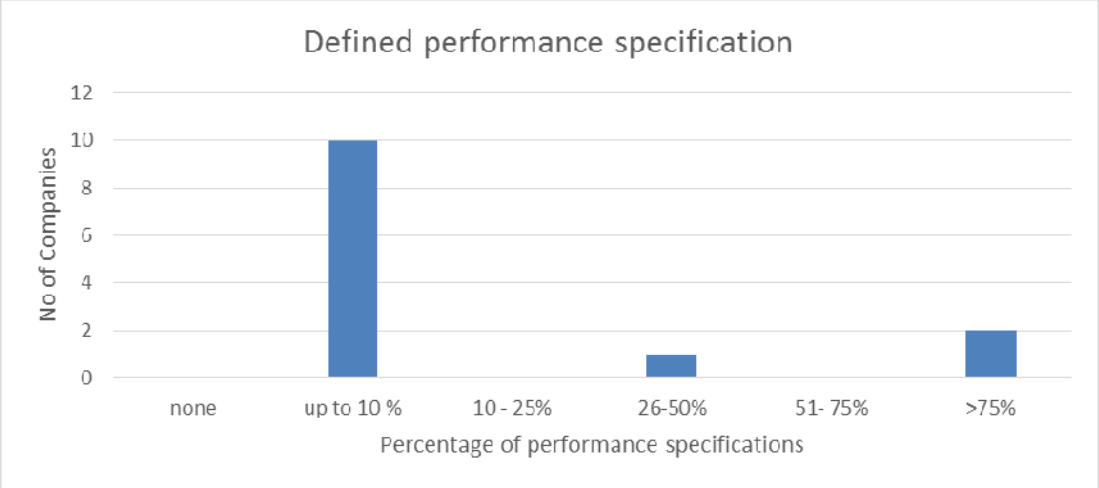
Sudan



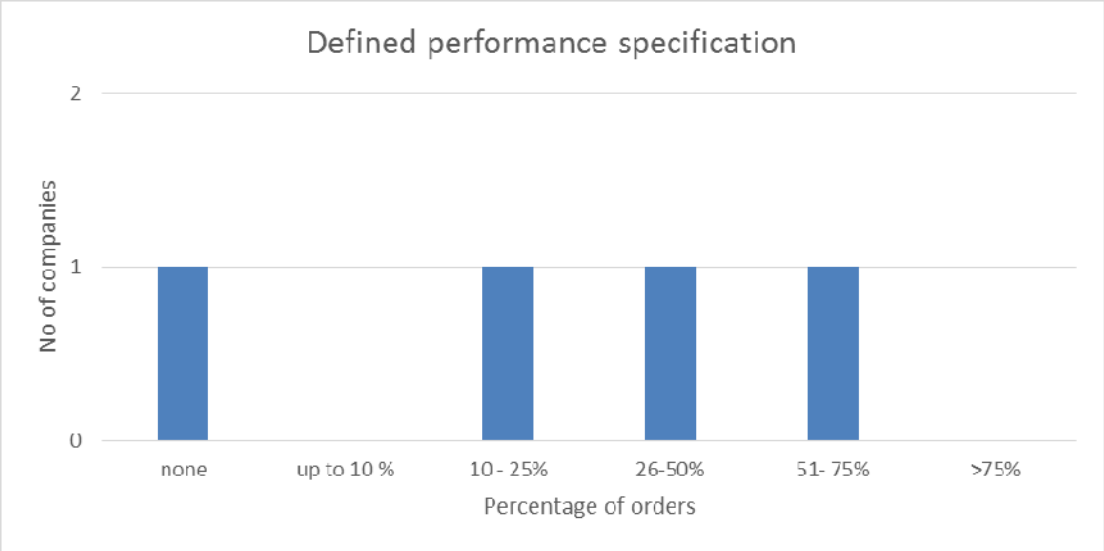
Direct exporting to EU / EEA is not evident in the current activities of many of the producers. The project can only serve to help with defining the route to improving this. From Ethiopia there is some evidence of suppliers who have an established export market for a majority of their output although this is not destined for the European market

Proportion of CLEARLY DEFINED orders in-coming

Ethiopia



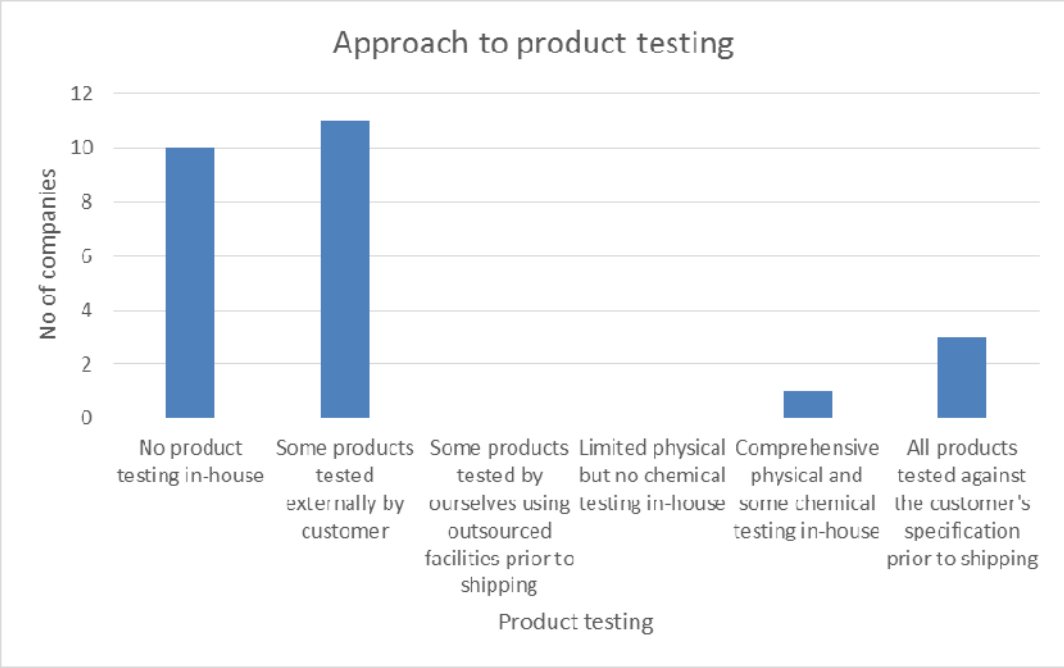
Sudan



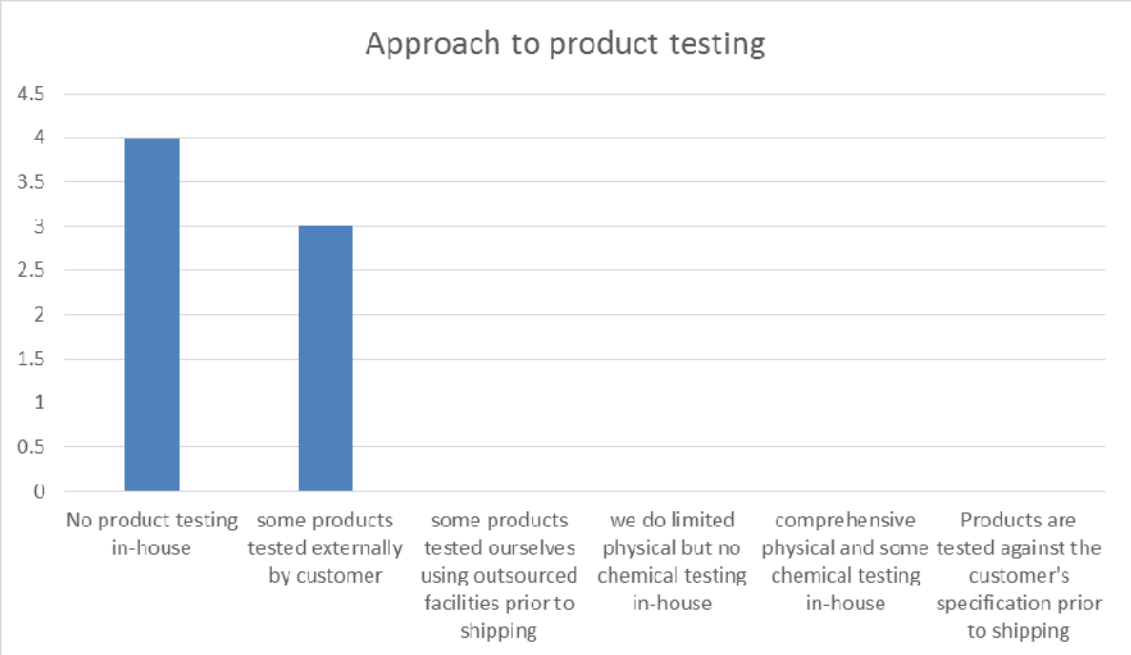
There is a wide range of results when referring to working to a defined specification and this is probably linked to the range of production types and the final destination of the product. Even where the customer does not supply a specification by developing an in-house specification for key performance parameters will help to drive up quality and may allow participation in markets where being able to demonstrate performance characteristics would be beneficial

Producer's Approach to Product Testing

Ethiopia



Sudan

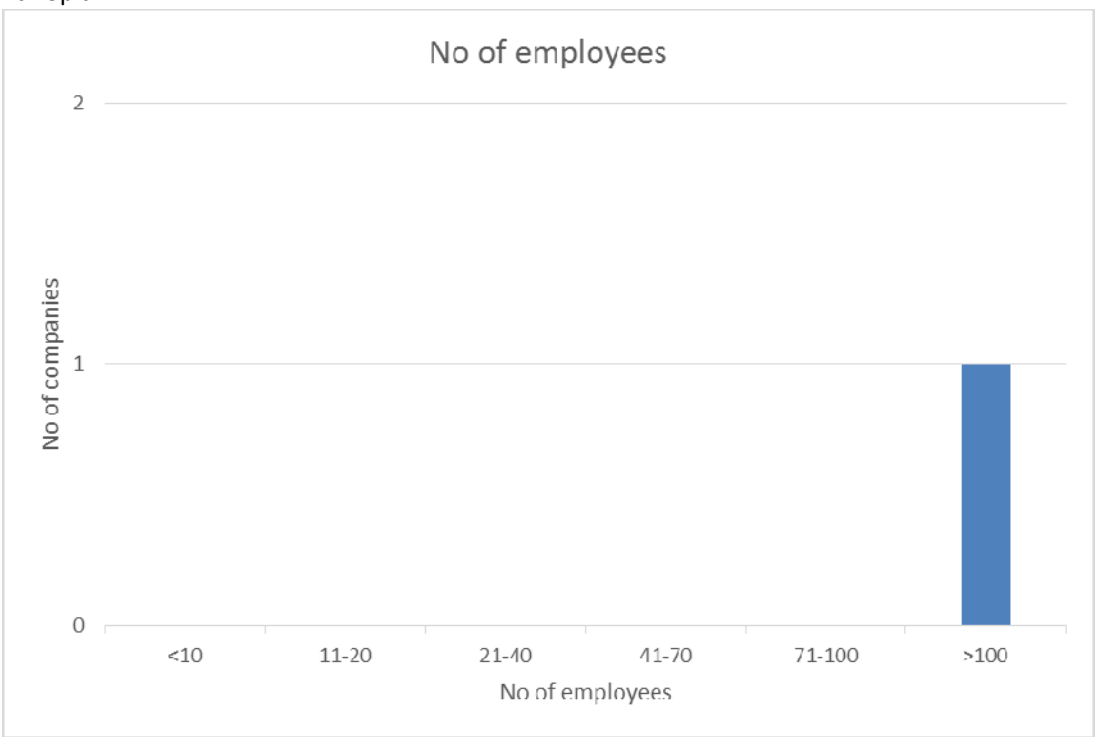


The majority of the survey respondents confirmed very little was done in the way of quality testing for either physical or chemical parameters. However, a small number of factories did carry out comprehensive testing

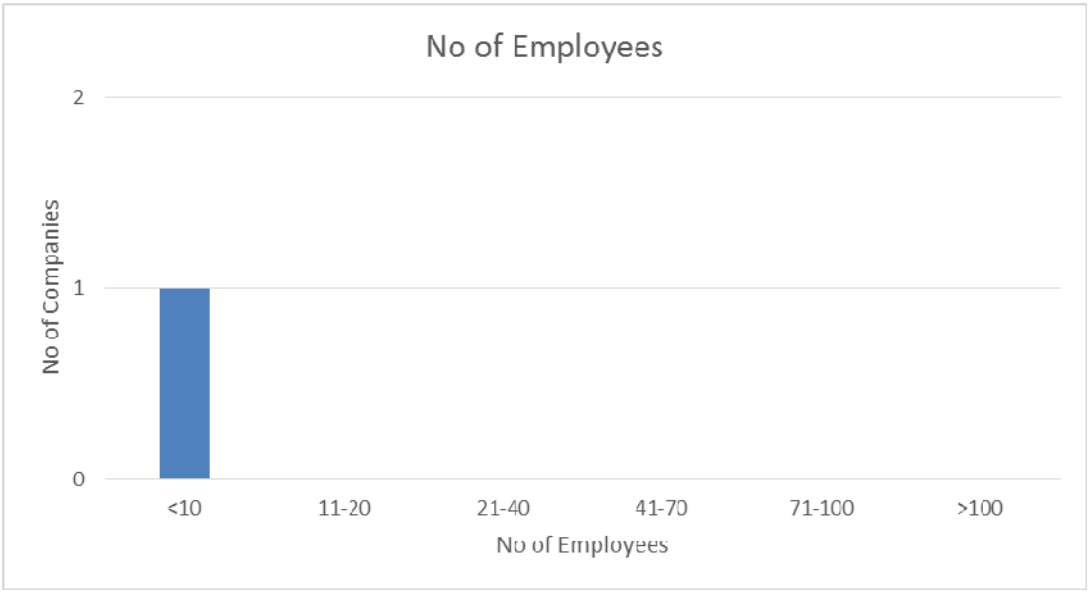

TBT PROGRAMME
OVERCOMING TECHNICAL BARRIERS TO TRADE

Comparison of Laboratory and Testing Services Data Collected
Size of Facility

Ethiopia



Sudan

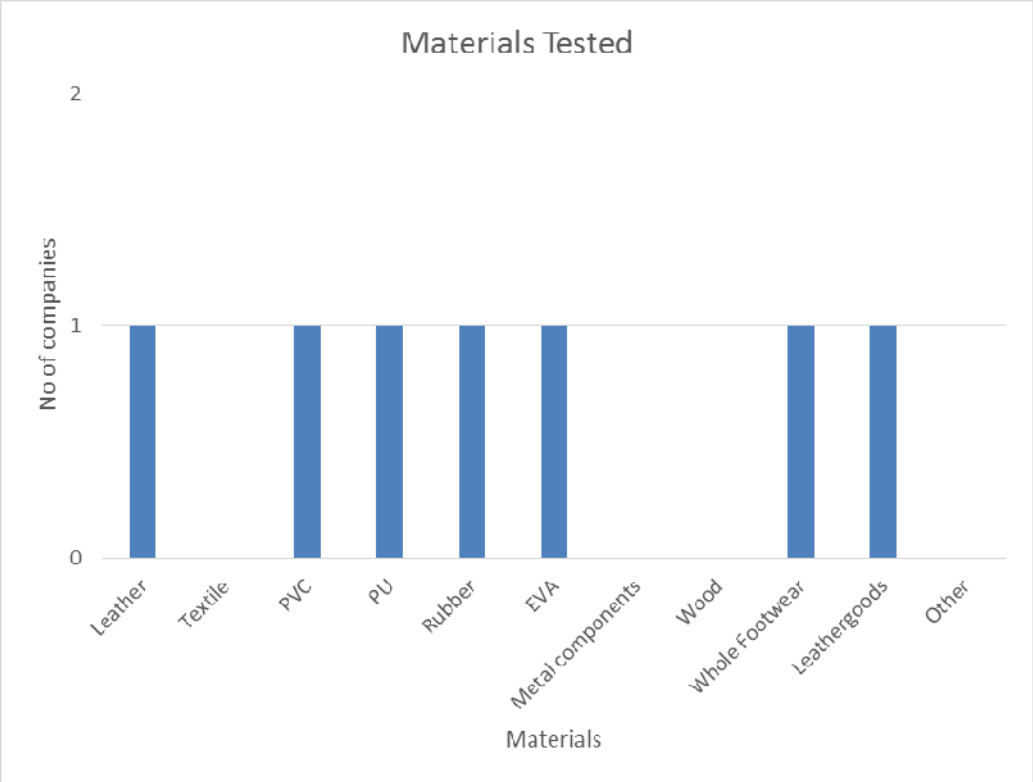


In Ethiopia LIDI is fully sector-focused, so all employees act in the leather industry field. Not so ECAE. They cover all industries, so only a proportion of employees there are focused on leather –

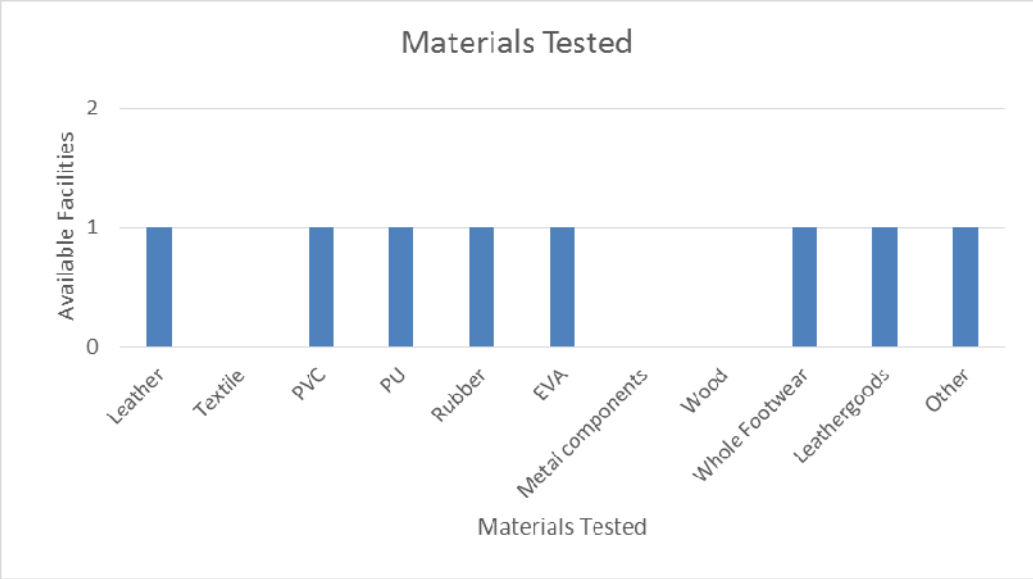
numbers were not included for ECAE in this section. As can easily be seen, the Sudanese facility is substantially smaller in size – related most probably to the reduced scope of operational capability and much lower industry demand.

Materials Tested

Ethiopia



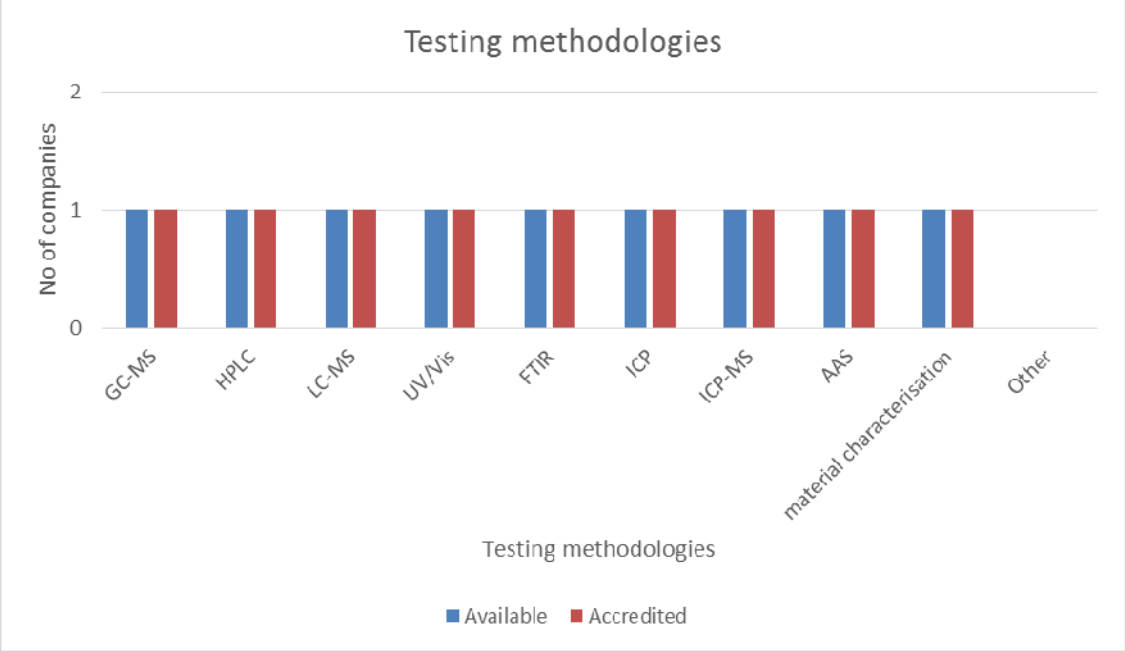
Sudan



To provide full and complete service, metal components and textiles need to be covered, so the facilities in both cases will be able to handle all types of footwear component in the future.

Lab Methods and Accreditation

Ethiopia



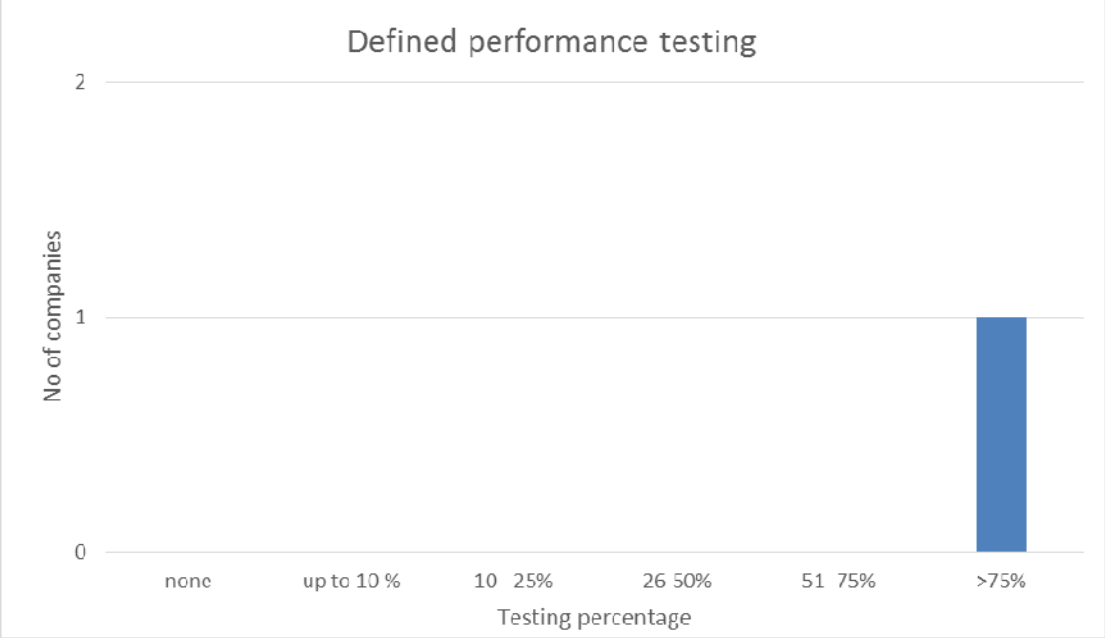
Sudan

In The Sudan National Leather Technology Centre, none of the advanced analytical capabilities (above) were reported, so it is reasonable to state that testing would have to be outsourced to another country, until such time as the industry demand makes capital expenditure on the equipment, people and training look a reasonable proposition.

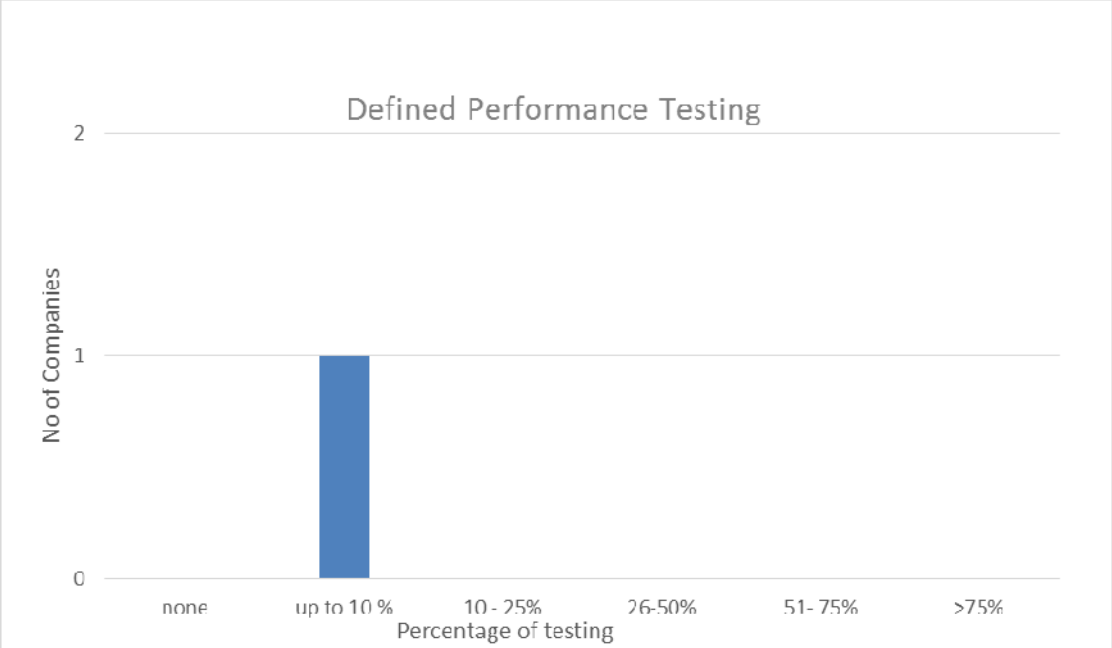
Laboratories need to be equipped for a blend of services, from basic testing to process troubleshooting and investigations into poor performance. Companies stated that they rely on the laboratories to get assistance with finding answers to production problems. While elements of the testing service provided by LIDI are ISO 17025 accredited, there are gaps in capability and also gaps in international compliance. In The Sudan, no ISO laboratory accreditation was claimed at NLTC.

Product performance testing

Ethiopia



Sudan

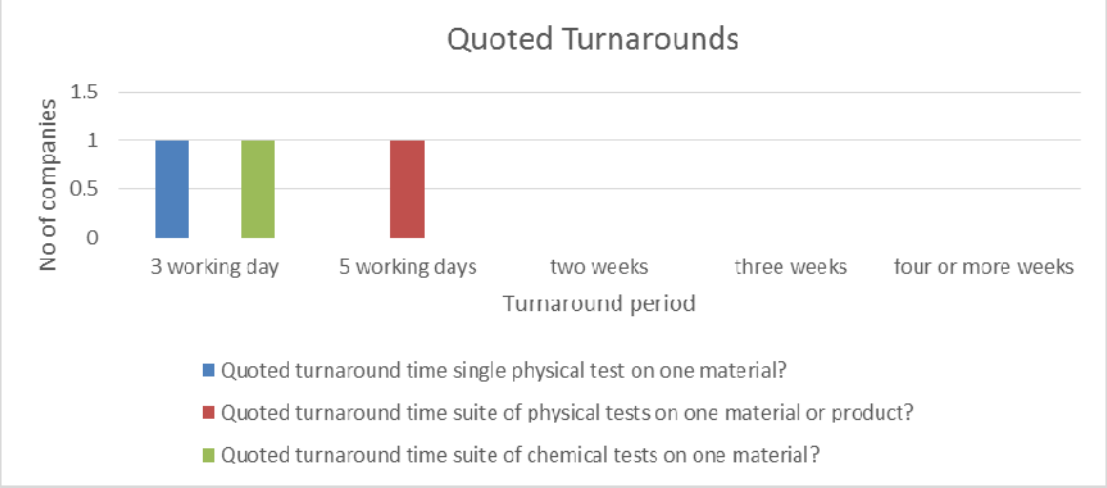


In The Sudan, much less performance verification by testing is done – probably due to the local industry mostly serving local market needs, with typically low-grade product that is not intended for

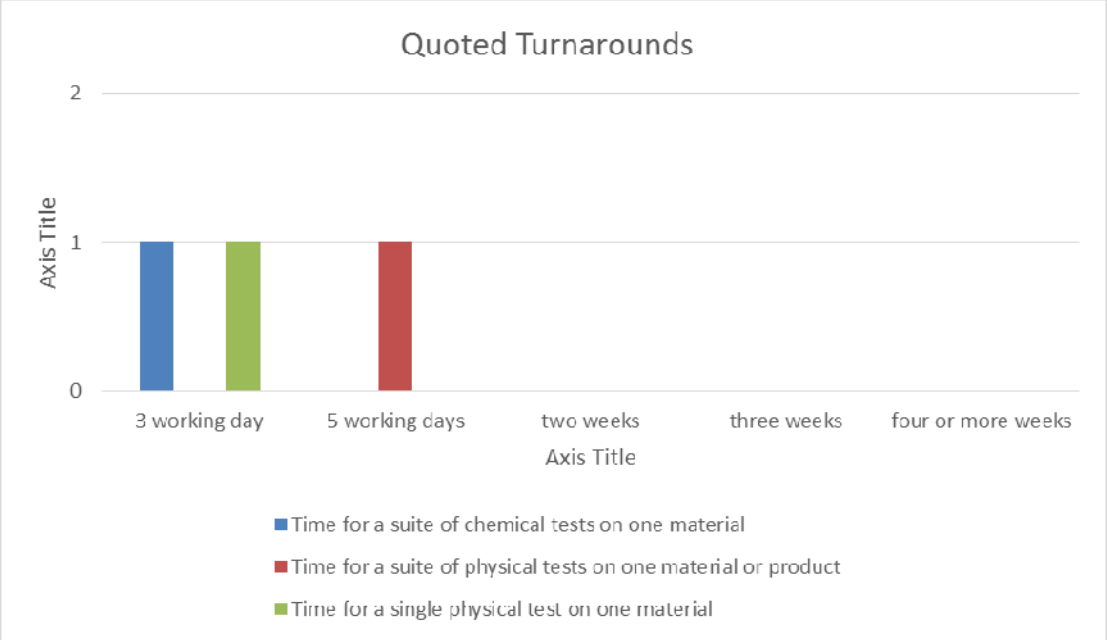

sale outside of the country.

Results Lead Times

Ethiopia



Sudan



Quoted testing lead times are similar in both cases. Naturally, when the laboratory is not particularly busy, the stated turn-around times are probably easy to meet. Should there be a substantial increase in demand for testing, the current resources and manpower may become stretched and times could stretch with them.