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# ACCESS OF FOOTWEAR RAW MATERIAL INPUTS

A STUDY FOCUSING ON INDONESIAN FOOTWEAR PRODUCERS'  
ACCESS TO COW FINISHED LEATHER

**FEBRUARY 2007 – STTA YUDI KOMARUDIN AND STTA JUSUF SUHARI**

THIS PUBLICATION WAS PRODUCED FOR REVIEW BY THE UNITED STATES AGENCY FOR  
INTERNATIONAL DEVELOPMENT. IT WAS PREPARED BY **DAI**

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## **DISCLAIMER**

THE AUTHOR'S VIEWS EXPRESSED IN THIS PUBLICATION DO NOT NECESSARILY REFLECT THE VIEWS OF THE UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT OR THE UNITED STATES GOVERNMENT.

# ACKNOWLEDGMENTS

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This publication was made possible through support provided by the United States Agency for International Development (USAID). The authors wish to express their sincere gratitude to the representatives of industry associations, small-to-medium enterprises, government agencies and other donor organizations which have been so supportive in providing us their insight about the selected industry value chains (IVCs).

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# 1. OBJECTIVE AND METHODOLOGY

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## 1.1 OBJECTIVE

As part of SENADA Industry Value Chain Strengthening Activities, footwear industry development has become a major focus due to its contribution to the national economy in terms of both foreign exchanges influx and labor employment. During a survey involving several players in the footwear industry in the Greater Jakarta area, the Jakarta Regional Competitiveness Center has identified lack of access to quality materials as a prime constraint, among others.

To clarify the above respondents' perception SENADA has assigned a team of consultants to conduct detailed research and analysis on how material inputs, particularly genuine cow finished-leather for shoe uppers (including shoe linings), are being accessed and procured by the footwear industry. Ease of access to the leather varies according to the balance of national production versus consumption. Factors weighing in this balance include adequacy of supply, the ability of manufacturers to produce goods according to specifications, and the quality of the finished products. Price competition between national and imported finished leather will also influence ease of access, as abundant local supply may be perceived as inaccessible if the price is much higher than imported products.

While quantity is relatively easy to measure, product specifications and qualitative analysis are mostly on a descriptive basis. The final output is a recommendation of short-term and long-term solutions in the form of a concrete and applicable action plan to improve access and procurement of finished leather material input, including possible recommendations further upstream – on the improvement of supply of raw leather.

Although there are many material inputs used in shoe manufacturing, this specific approach was taken because genuine leather is an input material:

- Used by all footwear types, such as casual, dress and even sports.
- Where value-added design and production come from within the footwear industry.
- Critical for the leather footwear industry (casual and dress), which is an area with excellent potential for SME development, as the arena is not dominated by big players.

Last but not least, USAID has long participated in productivity and quality improvements of Indonesian leather and footwear SME through donations of testing machinery to the Center for Research of Leather, Rubber and Plastic in Jogjakarta since 1960.

## 1.2 METHODOLOGY

This research makes use of primary and secondary sources. Primary sources are based on surveys and interviews in three main areas of tanning industry on the island of Java. These are Garut, in West Java; the Jogjakarta Province; and Surabaya and its surroundings in East Java, including Sidoarjo, Pasuruan and Malang. These three areas are expected to cover around 80% of the national potential since there is no significant area of tanning industry outside the island of Java.

In the Garut area, 20 factories — regionally considered mid-sized and large-sized factories — completed questionnaires with the help of the Indonesian Tannery Association – Garut Chapter. Consultants also conducted in-depth interviews with selected key players in the Garut area, some of whom are also involved in the Tannery Association.

The wide distribution of tanning factories in Jogjakarta Province makes it difficult to distribute and collect questionnaires. However, the Tannery Association - Jogjakarta Chapter and the Center for Research of Leather, Plastic and Rubber provided the Consultants with some assistance in mapping the current situation of the Jogjakarta-area tanning industry. In East Java, tanning factories are distributed across an even wider area than in Jogjakarta. Thus, SENADA Consultants mapped the current situation based on information from the Tannery Association - East Java Chapter. Some in-depth interviews were also made with several key players in the tanning industry in East Java.

Secondary research, done mostly through internet, was drawn from various sources including the Ministry of Industry, the Ministry of Trade, the Central Bureau of Statistics and several publications and newspapers. It should be noted that there is no complete Member Directory of the Indonesian Tannery Association detailing production capacity or product specifications. As a consequence, digging, collecting and organizing data involves substantial effort, complicated by data discrepancies among different sources, which leads Consultants to make analytical judgments about which data are relevant for further analysis.

## 2. OVERVIEW OF INDONESIA LEATHER FOOTWEAR INDUSTRY

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There are many “Types” of footwear in the market and also many “styles”. “Type” here refers to shoes with a particular function; “styles” is the design that makes the product distinctive or attractive. To avoid confusion and to be more specific we can generally categorize these products by “type” as follows:

- **Dress and casual / leather footwear.** This is a type of footwear for the normal daily working environment. Usually this type of footwear uses leather materials as the main component but for the lower market, man-made synthetic materials also can be used.
- **Trainers / sports footwear.** Trainers is a type of footwear for training / sports activities and is usually more durable – as it is designed to resist sudden impact in sports movement – and yet comfortable. Today, this particular type of footwear use a combination of leather, man-made synthetic textiles, rubber, plastic and other polymers.
- **Safety / working / heavy-duty footwear.** Safety footwear is a type of footwear for harsh environments, such as in the mining industry, rescue, building construction, *etc.* A Pull-Up leather (leather with a deep texture finished surface is usually used in this particular footwear.
- **Slippers / sandals.** Casual footwear that includes all sandals or other slip on products.
- **Orthopedics / special-purpose footwear.** This is a type of footwear for people requiring corrective shoes for irregular feet. Slippers / sandals is a type of footwear for less formal wear, made of either genuine leather or man-made synthetic materials.

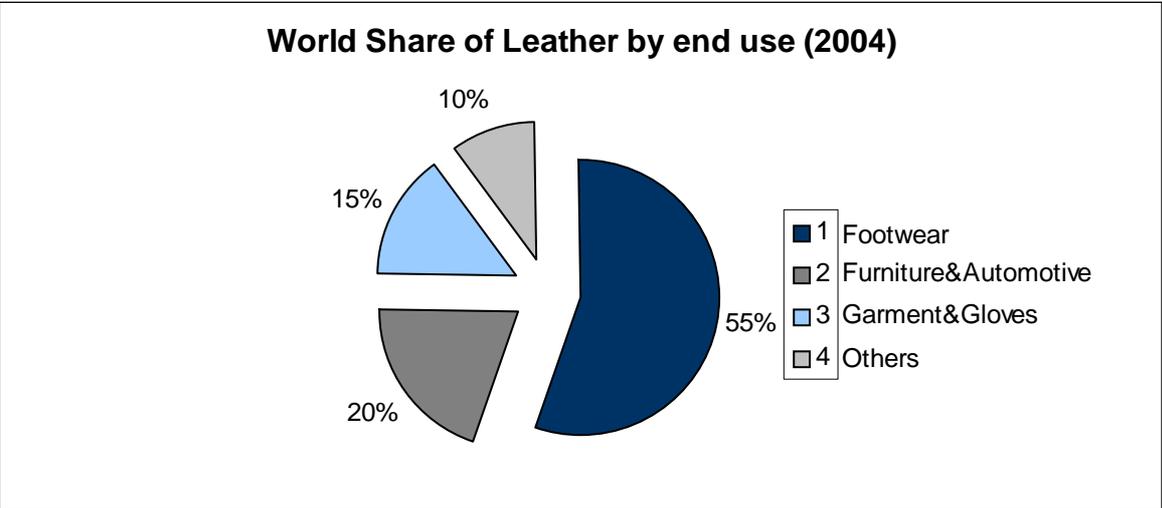
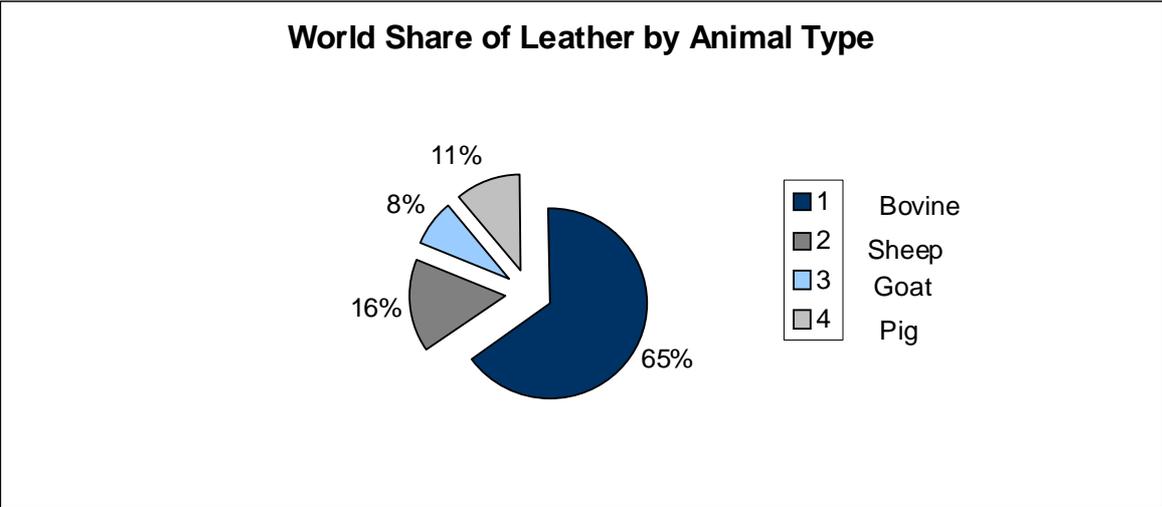
Each “type” of footwear requires certain properties of the materials to match the function of the footwear. Indonesian footwear manufacturers can produce any kind of the above types of footwear and the leather material for each of these types is available locally. Indonesian footwear in the period 1999–2003 was dominated by trainers / sports footwear, with a 76.4% share of total exported footwear, while dress / leather footwear accounted for less than 9.9%. For dress and leather footwear in terms of global market share, in the period 1999-2003, Indonesia contributed around 0.7%. While in terms of export value in the year 2004 Indonesia’s gained an increase by 100% from the year 2003.

**TABLE: INDONESIA DRESS / LEATHER FOOTWEAR EXPORT  
(IN US\$ BILLION)**

	1999	2000	2001	2002	2003	2004	2005
<b>World Dress / Leather Footwear Market</b>	19.88	19.95	20.46	21.33	22.38		
<b>Indonesian Exported Dress / Leather Footwear</b>	0.17	0.16	0.14	0.13	0.10	0.20	0.10
<b>Share</b>	0.9%	0.8%	0.7%	0.6%	0.5%		

*Source: Ministry of Trade 2005*

In the years 1998–2004, dress / leather footwear from Indonesia in the European market reached 5.9% of total imports, but if we look at total European imports from Indonesia, there is a decrease by 15.9%. European imports from Indonesia reached 70,331,000 pairs in 1998, then declined to 59,146,000 pairs in 2004.



Source: [www.ukleather.org](http://www.ukleather.org)

In Indonesia there are two major kinds of footwear market — by-order products and by-stock products. By-order means that the footwear is produced according to the buyers order and specifications. By-stock refers to footwear designed and developed by the manufacturer themselves, then produced and marketed. Nowadays market by-order products dominate the market – especially Trainers / Sports Footwear. The major brands, such as Nike, Adidas and Reebok, usually give an order to the factory complete with all specifications and instructions, including the approved materials suppliers. This particular situation sometimes causes the factory difficulties in material sourcing and this is one of the many factors leading the factories to continue importing leather instead of purchasing it locally.

Market by-stock products are a totally different story. The footwear is developed and produced by the factory and then marketed, so they are free to source the materials from anywhere. But there are some difficulties in sourcing local leather due to a lack of information on where footwear leather can be bought. In this environment, footwear manufacturers find difficulties accessing information for their material suppliers and accessories suppliers locally. This absence of material and accessory support necessarily hampers the development of footwear products. On the other side, the leather tannery and other accessories encounter difficulties marketing their products to the footwear manufacturers.

## 3. LEATHER INPUT CONSTRAINTS IN THE FOOTWEAR INDUSTRY

### 3.1. NATIONAL PERSPECTIVE

#### 3.1.1. QUANTITATIVE ANALYSIS

National supply of finished leather is a combination of national production and import. In 2006 the combined supply was 81 mill sq ft. National consumption amounted to 69 million sq. ft., leaving an excess of 12 mill sq feet intended for export. Remarkably, the export volume came mostly from the tanning industry in East Java, with two big factories contributing 9 million sq. ft. If we take into account other, smaller tanners, East Java tanners might contribute 11 of the total 12 mill sq feet of exported national finished leather. At the time national production was below national consumption (57 mill sq feet - 69 mill sq ft= -12 mill sq feet), the activities of several tanners oriented for export served to widen the deficit of national finished leather, thus creating a need for the import of at least 24 mill sq ft for national footwear manufacturers in 2006. However, this 24 mill sq ft of imported finished leather was generally consumed by Indonesian footwear manufacturers for export sales. This resulted in part because most of the high-grade national finished leather was being exported, but also because mismatched-product specification problems were also a big factor, as will be discussed further in Product Specifications Analysis.

<b>Cow Finished Leather (in million square feet)</b>					
	2002	2003	2004	2005	2006
Consumption	60	64	68	66	69
Production	45	56	67	62	57
Export	18	19	24	22	12
Import	33	27	25	23	24

*Source: Indonesia Footwear Producers Association (APRISINDO)*

*Notes: Export in 2004 & 2005 mixed up with wet blue*

Therefore, the total volume of national finished leather supplied to the national footwear industry (minus export-oriented tanners) was only 45 mill sq feet, or about 65% of total national footwear consumption. The deficit is mostly due to the continuous collapse of national tanners — from 112 factories operating in 1998 to only 46 factories operating in 2002. The tanning industry then rebounded as they re-opened some factories and produced significant output in 2004 (though questionable since unutilized capacity only 2.5%). Unfortunately, as they re-opened more factories in 2006, production slipped again, leaving almost one-third capacity unfilled or switched to producing sheep/goat finished leather for garments or gloves, as we found in cases in Garut and Jogjakarta. See the table below.

	Number of Tanning Factory	No. of Home Tanners	Production Capacity (square ft)	Production Output (square ft)
1998	112	400	140,000,000	
2000	76	252	95,000,000	
2002	46	136	57,500,000	45,000,000
2004	55	200	68,750,000	67,000,000
2006	67	240	83,750,000	57,000,000

*Source: Indonesia Tanners Association (APKI)*

Hence, the inability of national production to meet national demand is not because of a lack of production capacity. The table above, from the *Indonesia Tanners Association*, confirms that national production capacity is around 140 mill sq feet per year, if all 112 factories keep producing at optimum capacity. Given the fact that in 2006 national production reached 57 mill sq feet, the current national utilization rate is only 40.7% when compared to full capacity in 1998. This is a very low rate in light of what has already been invested, and it is somewhat ironic given that demand for finished leather from the global footwear industry continues to rise. *Global Trade Atlas* shows there was an 11.5 % increase from 2004 to 2005 for total export of footwear using leather (both sport and non-sport) with HS Code 6403.

The collapse of the national tanning industry (1998-2002), perceived by some experts from the Tanners Association to have been caused by a severe lack of raw hide, particularly started from the end of the Suharto era. Suharto's favorite policy of national livestock development, such as developing the center for research and development in the Tapos Resort area and giving incentives to cow farmers was discontinued by the new regime. This situation is then complicated by some difficult regulations concerning importation of raw hide, semi-finished and finished leather, which will be explained in the Policy and Regulations Analysis Section.

### 3.1.2. PRODUCT SPECIFICATIONS AND QUALITATIVE ANALYSIS

Leather is the oldest principal material used for footwear and, because of its many special properties, leather continues to serve uniquely well for this purpose. The types of footwear produced in Indonesia are as follows: dressed (leather) shoe, sports trainer shoe, safety shoe, sandals and clogs. If we look at this list, each type of footwear product uses a great variety of materials – leather, textiles, or man-made (synthetic) materials – but the principal materials used are leather. Ironically, footwear manufacturers mostly imported materials from overseas despite the availability of materials that can be sourced locally, such as finished leather.

<b>FOOTWEAR MATERIALS USED IN THE FOOTWEAR INDUSTRIES</b>			
<b><u>Classic / Dress / Casual Footwear (Leather Footwear)</u></b>			
<b><u>Genuine Leather</u></b>	<b><u>Man Made Materials</u></b>	<b><u>Textiles</u></b>	<b><u>Others</u></b>
1. Full Grain Leather	1. Polyurethane Coated Fabrics	1. Canvas	1. Resin Rubber
2. Corrected Grain Leather	2. PolyVinylChloride Coated Fabric	2. Non Woven Fabrics	2. Crepe (Natural) Rubber
3. Nubuck	3. Poromerics		3. Thermoplastic Rubber (TPR)
4. Pull Up			4. Polyurethane (PU)
5. Suede Split			5. PolyVinylChloride (PVC)
6. Lining Leather			6. EthyleneVinylAcetate (EVA)
7. Cordovan			7. Polychloropene
8. Exotic Leather			
<b><u>Trainers (Sports) Footwear</u></b>			
<b><u>Genuine Leather</u></b>	<b><u>Man Made Materials</u></b>	<b><u>Textiles</u></b>	<b><u>Others</u></b>
1. Corrected Grain Leather	1. Polyurethane Coated Fabrics	1. Nylon Mesh	1. Polyurethane (PU)
2. Nubuck	2. PolyVinylChloride Coated Fabric	2. Spandex	2. PolyVinylChloride (PVC)
3. Suede Split	3. Poromerics	3. Synthetic Sponge	3. EthyleneVinylAcetate (EVA)
		4. Non Woven Fabrics	4. Thermoplastic Rubber (TPR)
			5. Polychloropene
<b><u>Safety Footwear</u></b>			
<b><u>Genuine Leather</u></b>	<b><u>Man Made Materials</u></b>	<b><u>Textiles</u></b>	<b><u>Others</u></b>
1. Full Grain Leather	1. PolyVinylChloride Coated Fabric	1. Nylon Mesh	1. Thermoplastic Rubber (TPR)
2. Corrected Grain Leather		2. Synthetic Sponge	2. PolyVinylChloride (PVC)
3. Pull Up		3. Canvas	3. Vulcanized Rubber
4. Lining Leather		4. Non Woven Fabrics	4. Polychloropene
5. Suede Split			

- **Indonesia finished leather tannery.** In Indonesia, leather tanneries can be divided into two main different categories: traditional and modern. Traditional means that less machinery is used in the process and the production output is small compared to the modern tannery. Most of Indonesia's tanneries still use this particular method. Traditional tanneries come with a host of environmental impact issues and quality concerns. Modern tannery processes employ modern technology and machinery. Usually, the modern tanneries are more environmentally friendly because of their well-managed waste treatment.
- **Product specifications of Indonesian finished leather for footwear.** In theory, the leather tannery should be able to produce any type of leather required by the footwear manufacturer. Footwear Leather has characteristics of durability and permeability, with the basic specifications::
  - Process: Full chrome, vegetable, combination full chrome and vegetable.
  - Type of skin / hides: Veal, calf, goat, kid, exotic.
  - Thickness: 1.8mm. to 2.4mm (upper leather), >5 mm. (bottom leather).
  - Finished: There are seven typical types of finished leather:
    - a. Full Grain Leather: Leather with natural texture and no coating on the surface.
    - b. Corrected Grain Leather. Leather with Polyurethane coating on the surface. Sometimes printed with artificial patterns such as snake-skin, crocodile-skin, and reptile-skin..
    - c. Nubuck. Leather with smooth, fine, buffed, furry texture surface.
    - d. Suede Split. Split leather with rough, buffed, furry texture surface.
    - e. Pull-Up. Leather with deep texture finished surface.
    - f. Lining Leather. Leather for footwear lining.
    - g. Exotic Leather. Mostly the exotic animals such as snakes, lizards, crocodiles, stingrays, etc.

Logically, finished leathers produced by the Indonesian tanners can be used by footwear manufacturers (export-oriented and domestic-oriented) but a variety of factors prevent the manufacturers from using them, particularly the export-oriented footwear manufacturers.

Footwear Manufacturer	Leather Manufacturer
Many variants required	Fewer variants available
Just in Time	Based on available stock
Required certain standard specification	No fixed standard specification
Constant product quality is compulsory	Difficult to maintain quality standard
leather requirement data not available	Products specifications data not available

Beside the above problems, most export-oriented footwear manufacturers get their orders from abroad, with high-grade leather specifications (other than black and brown) that local tanneries are not currently able to meet. Local tanneries mostly still use low-quality chemicals which will fade the color of the leather. If the tannery is forced to use the high-quality chemicals in production, the price will no longer be competitive with import leather. Import leather is cheaper than local leather.

### 3.1.3. PRICING AND PROCUREMENT PROCEDURE ANALYSIS

- **Local leather.** Leather procurement by the footwear industry for the domestic market is generally done through local purchases of Full Grain, Crazy Horse, and Nubuck with the price range of Rp.16,000 (US\$1.78) to Rp.20,500 (US\$2.28) per square foot. These prices reflect leather bought by the footwear industry mostly from the tanneries in West Java, Central Java, and East Java. An additional 10% PPN must be added but, if the footwear is going to be exported,

the PPN can be refundable. Leather tanneries in West Java mostly buy their raw materials from Central Java, East Java, and West Java (Brahma) as well as from Sumatera and even Sulawesi. The terms of payment are “cash and carry” for buying raw materials. Sometimes the raw materials are imported from New Zealand and Australia with L/C terms. Because of occasional disease epidemics, imported raw materials from certain countries are sometimes quarantined. Usually the credit period for sold leather is between 2 to 6 months, which can significantly impact the cash flow of the tannery.

- **Import leather.** In the year 2006, the footwear industry had to submit a clearance quota for a three-month forecast of imports of finished leather – with detailed specifications, quantity, country of origin, and price – to Direktur Jenderal Peternakan (Director General of Livestock). Previously the clearance quota had been issued by Direktur Budidaya Ternak Ruminansia / Non-Ruminansia. Because the clearance has to be signed by the director general, additional time is consumed in the process. When imported leather is mentioned and categorized in occasional epidemics, the country of origin must quarantine the hides or skins by means of fumigation, *etc.* The expense is borne by the importer – in this case, the footwear manufacturer. Of course, this extra expense affects final production costs. Problems at the customs clearance in seaports and airports arise when there are administrative discrepancies, such as certificates of health. These problems also require additional expense to facilitate the clearance process.

In summary, the problems of importing leather, based on interviews with some importers are:

- Document issuance of Sertifikat Pelepasan Karantina and Surat Persetujuan Bongkar is very bureaucratic and time-consuming, as well as costly. For issuance of Surat Persetujuan Bongkar from the quarantine body, there is an additional-illegal cost (*pungli*) around Rp. 120,000 per shipment.
- The quarantine clearance minimum adds 1 to 2 additional days on top of processing the Sertifikat Pelepasan Karantina and Surat Persetujuan Bongkar.
- Complications in procedures for document issuance cause time waste and cost in the majority of shipment ports. In the airport, the custom clearance is less problematic. KINS only ask for document compliance such as Surat Pengajuan Sertifikat Pelepasan Karantina from the Quarantine Body and, if all the documents are compliant, the leather can be released.
- Another regulation that brings additional cost is the requirement to have an Instalasi Karantina Hewan Sementara (IKHS), or Temporary Installed Animal Quarantine, for performing the fumigation of the imported leather. IKHS is not required for finished goods because IKHS is only for monitoring animals with Penyakit Mulut Kuku (PMK) or hand, foot and mouth disease/HFMD. IKHS adds an extra cost for fumigation and transportation.
- Misinterpretation of the regulations happens. For example, it is not compulsory for leather products originating in Italy to attach a Certificate of Health (COH) for their raw hides, but Indonesia still requires Italian authority to issue COH.

## 3.2. REGIONAL PERSPECTIVE – GARUT AND WEST JAVA TANNING INDUSTRY

### 3.2.1. INDUSTRY CAPACITY

Total production capacity of Garut tanneries is 2,000,000 Square Feet / month from 8 large factories (having capacity more than 100,000 sq ft per month), 12 mid-size factories (having capacity 10,000-100,000 sq feet/month) and around 200-300 home industry tanneries.

	CAPACITY (SQ FT / MONTH)	NUMBER	TOTAL CAPACITY (SQFT/MTH)	PRICING (RP/SQ FT)
<b>Tanner Size</b>	Big Factory (> 100,000 sq ft/mth)	8	1,490,000	
	Mid size Factory (10K- 100K sq ft/mth)	12	645,000	
	Home Industry (< 10K sq ft/mth)			
<b>Product Specifications</b>	Nubuck	10		13K-14K
	Nappa (full & corrected grain)	13		12K-12.5K
	Plotter	11		
	Lining	10		9K-11K

Of the above capacity, 80% or 1.6 mill sq ft is utilized in producing cow finished leather for footwear industry and the rest is for producing sheep and goat finished leather for glove and garment industry. In Cisarua there is a large size tanning factory producing cow finished-leather for footwear. Its capacity is 1 mill sq ft per month. In summary, the total tanning capacity in West Java (Garut and Cisarua) is around 2.6 million sq ft per month, or 31 mill sq ft per year for producing cow finished leather for the footwear industry.

### 3.2.2. PRODUCT SPECIFICATIONS AND QUALITATIVE ANALYSIS

- **Product variety and specifications of garut finished leather.** the most common products from Garut are as follows:
  - *Full Grain Leather.* Leather with natural texture and no coating on the surface.
  - *Corrected Grain Leather.* Leather with polyurethane coating on the surface. Sometimes printed with artificial patterns such as snake-skin, crocodile-skin and reptile-skin.
  - *Nubuck.* Leather with smooth, fine, buffed, furry texture surface.
  - *Crazy Horse.* Finished Leather with oily finished surface.
  - *Suede Split.* Split leather with rough, buffed, furry texture surface.
  - *Pull-Up.* Leather with deep texture finished surface.
  - *Lining Leather.* Leather for footwear lining.
- **Product quality of Garut finished leather.** Since the production process is still largely by traditional methods, obtaining a very high quality standard is quite a challenge, especially in the area of finishing process. Very few tanneries are equipped with modern machinery to produce high-quality product finishes.
- **Footwear manufactures leather requirement overview.** Generally the type of finished leather required in footwear manufacture is based on the type of footwear to be produced. Each type of footwear requires certain properties in the leather products. Footwear manufacturers in Indonesia usually produce the footwear based on the order, style, and time delivery. Since only few materials can be sourced locally, importing materials from abroad is the best option available for the sake of time and convenience. Many footwear buyers already set a materials quality standard and the footwear manufacturers are not aware that they can also source the finished leather from Garut.

- **Footwear manufacturer leather requirement versus Garut finished leather product.** If we look at the table in National Perspective-Product Specifications and Qualitative Analysis, the majority of the finished leather materials can be sourced from Garut, but there are certain aspects that prevent the footwear manufacturer from purchasing the finished leather from Garut. The certain aspects are as follows:
  - Resistance to Garut Finished Leather because of poor image of Garut Finished Leather
  - Irregular time delivery that can jeopardize footwear production schedules
  - Irregular (inconsistent) quality standards that can jeopardize the quality of footwear
  - Difficulties meeting the quality standard of the footwear manufacturer due to lack of quality management and modern process machinery
  - The price of Garut Finished Leather is sometimes more expensive than the same product imported from abroad due to government policies on imported raw materials
  - Information about the Garut Finished Leather is somehow very limited to the footwear manufacturers due to lack of Garut tannery data directory.

### 3.3. REGIONAL PERSPECTIVE – CENTRAL JAVA TANNING INDUSTRY

#### 3.3.1. INDUSTRY CAPACITY

In Jogjakarta and its surroundings, the total capacity of the 9 factories registered under the Association is 26.5 million sq ft per year. However, it is only 3.5 mill sq ft or around 13% of them currently utilized for upper / lining production for leather footwear. Some of them who are now utilizing capacity for finished leather for garment or glove production mention that lack supply of raw (cow) hide is the biggest factor causing them to switch.

#### 3.3.2. PRODUCT SPECIFICATIONS AND QUALITATIVE ANALYSIS

- **Surrounding Jogjakarta finished leather tannery overview.** In the areas surrounding Jogjakarta there are not many leather tanneries. The majority of processes are sheep and lamb skin and the finished leather products mainly are supplies for gloves manufacturer. They also make leather for footwear, but in lesser volumes.
- **Centre for Research of Leather, Rubber and Plastic (BBKPP).** In the town of Jogjakarta there is an institution called the Centre for Research of Leather, Rubber and Plastic (BBKPP), which is a technical implementing unit under the Ministry of Industry that carries out research and development, standardization, testing, certification and calibration on Leather, Rubber, and Plastic. This institution has a training facility and testing laboratory equipment that can be used for the benefit of leather tanneries, footwear manufacturers and the rubber / plastic product industries. They are also already accredited with National Accreditation Committee (KAN) to be able to give quality certification to the tested products for leather, footwear, rubber and plastic.
- **Product variety and specifications of surrounding Jogjakarta finished leather.** The most common products from Jogjakarta and its surroundings have are as follows:
  - *Full Grain Leather.* Leather with natural texture and no coating on the surface.
  - *Corrected Grain Leather.* Leather with Polyurethane coating on the surface. Sometimes printed with artificial patterns such as snake-skin, crocodile-skin and reptile-skin.
  - *Suede Split.* Split leather with rough, buffed, furry texture surface.
  - *Lining Leather.* Leather for footwear lining.

- **Product quality of surrounding Jogjakarta finished leather.** The majority of Finished Leather products from the area surrounding Jogjakarta is suitable for producing gloves and garments. The tanneries already use the modern production method, so the quality of the finished leather is considered above average. Because of BBKPP, the leather tanneries around this area benefit from easy quality control and technical advice in leather production. Compared with Garut Leather, the Jogjakarta area Leather is of higher quality, but the raw material is only from sheep and lamb. Since these tanneries are categorized as medium to big production, the environmental issue of waste treatment is tremendously important, since waste chemicals for processing leather are toxic and can be dangerous to the surrounding environment.
- **Footwear manufacturer leather requirement versus surrounding Jogjakarta finished leather products.** Most of the tanneries surrounding Jogjakarta do not produce so much of the footwear leather; instead, they produce leather for leather gloves and leather garments. Although the tannery can produce the footwear leather, they are not willing to do so, because the raw materials they currently use (sheep skins and lamb skins) are easier to get than raw cow hides. Also, some of the tanneries also have a leather gloves factory. By comparing and analyzing the specifications of the Jogjakarta area tanneries, the footwear manufacturers are unable to purchase leather from this area; but, by analyzing the installed machinery and equipment, they see potential for producing the higher-quality footwear leather, because of their experience in producing higher-quality gloves / garment leather.

### 3.4. REGIONAL PERSPECTIVE – EAST JAVA TANNING INDUSTRY

#### 3.4.1. INDUSTRY CAPACITY

The East Java tanning industry is the biggest in the nation in producing finished leather for the footwear industry. Its current capacity is 46 million sq ft per year from 8 tanning companies. Its biggest factories, however, produce finished leather for the export market, as explained in national perspective. Some other factories, especially the mid-level factories, also try to open new export markets and one of them has been successful at getting consistent orders from India. There is a strong tendency in this region to explore more export markets, as the national footwear industry response has been lukewarm in recent years, particularly dealing in payment terms.

#### 3.4.2. PRODUCT SPECIFICATIONS AND QUALITATIVE ANALYSIS

- **East Java finished leather tannery overview.** East Java leather tanneries can be divided into two classes. First is modern tanneries and the other is traditional tanneries. The traditional tanneries are located around Magetan area. Magetan tanneries share many of the features of the tanneries in the Garut area. The modern tanneries are located around Malang, Pasuruan, and the Sidoarjo area and the majority process leather from cow hides.

When we focused on the modern tanneries around East Java, we found out that the majority of them have a common problem, which is difficulty in sourcing the Java Box (Java Cow Hides). The Java Cow Hides have become precious since people around the world associate Java Box with the best kind of leather in the world. There is a reputation that the cows are well-maintained during their lives on the farms and also the surface texture of the hides is considered very good. The hides are also easily processed with aniline finishes. Other cows outside Java are not as well maintained, so they are prone to skin problems such as scars, insect bites, skin disease, *etc.*, which will effect the finished products.

The trouble is that most of the leather customers require a Java Box specification, so Java Box became rare and extremely pricey. There was big demand, but little supply, causing the price to skyrocket. That is why tanneries have to pay cash to purchase the Java Box. Another reason the tanneries choose the Java Box is because their surface structure is unique compared to other cow species. It is also easier to process with aniline finish (natural finish) for high-quality footwear products.

As for the scarcity of this particular cow hide, accusation has been made about the ECCO leather tannery located in Sidoarjo. ECCO leather tannery is accused by the majority of tanneries of having purchased most of the Java Box all around Indonesia, preventing other tanneries from sharing the supply. ECCO tannery consumes around 40 tons of raw hides each day.

As we analyze inside the ECCO leather tannery, this accusation is not entirely correct and the fact is that they have so many varieties of finished leather products, not all of which are processed based on the Java Box. 60% of what they process is imported Wet Blue from The Netherlands and also from the USA. What makes ECCO leather tannery superior to other tanneries around Indonesia is that they implemented sophisticated technology in the processing unit and also advanced production management.

Most of the ECCO leather tannery products are for the use of their footwear division. Leather either processed to be a Finished Footwear Upper product and then exported back to Denmark to be assembled as a whole Footwear Product or the finished leather is exported to the other ECCO footwear factories around the world. Only little of their products are sold to the market. And because they use the finished leather for their own footwear division, the efficiency in leather cutting as a footwear component can be very optimal.

Only small rejected portions are sold to the market in bulk (sell per kg). Even small rejected portions are enough to endanger the Magetan finished leather market, since the ECCO leather tannery products are processed with high quality specifications. ECCO leather tannery also accepts order from other companies based on the minimum order of 1000 square feet. Note that ECCO's finished leather is more expensive than other tanneries' products because of their quality.

- **Product variety and specifications of East Java finished leather.** The most common products from East Java are as follows:
  - *Full Grain Leather.* Leather with natural texture and no coating on the surface.
  - *Corrected Grain Leather.* Leather with Polyurethane coating on the surface. Sometimes printed with artificial patterns such as snake-skin, crocodile-skin and reptile-skin.
  - *Nubuck.* Leather with smooth, fine, buffed, furry texture surface.
  - *Crazy Horse.* Finished Leather with oily finished surface
  - *Suede Split.* Split leather with rough, buffed, furry texture surface.
  - *Pull Up.* Leather with deep texture finished surface.
  - *Lining Leather.* Leather for footwear lining.
- **Product quality of East Java finished leather.** Because East Java has two different categories of tanneries, we also can differentiate two different levels of quality of the finished products. The quality of the traditional tanneries around Magetan area is similar to that of Garut, while the modern tanneries already reach the stage of export quality.

- **Footwear manufacturer leather requirement - East Java finished leather products.** The majority of the finished leather for footwear can be sourced from East Java's modern tanneries but not the traditional tanneries. There are certain aspects that prevent the footwear manufacturer from purchasing finished leather from East Java traditional tanneries. Those certain aspects are as follows:
  - Irregular time delivery that can jeopardize footwear production schedules.
  - Irregular (inconsistent) quality standards that can jeopardize the quality of footwear.
  - Difficulties meeting the quality standards of the footwear manufacturers, due to lack of quality management and modern process machinery.
  - Prices of East Java Finished Leather sometimes are more expensive than the same product imported from abroad, due to government policies on imported raw materials and also because the imported finished leather is a stock lot and not a production stock.

## 4. SUMMARY OF PRIMARY CONTRANTS TO RAW MATERIAL SOURCING

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This report identified four primary constraints that small and medium footwear manufacturers have to accessing raw material inputs:

**Inadequate supply problem.** There is strong evidence that national production of finished leather is imbalanced against national consumption by the footwear industry. This would still be the case even if all national production were sent to supply the national footwear industry. Field research per region also proves the combined capacity of West Java, Jogjakarta and East Java, with 80 million sq ft per year, is almost the same as the national statistic data of 83 million sq ft capacity, calculated from 67 tanning factories with an average capacity of 1.25 mill sq ft per year using baseline data from 1998. Of this 80 mill sq ft capacity, unfortunately only two-thirds, or 57 mill sq ft, are utilized for producing cow finished leather, despite the national consumption of 69 mill sq ft, due to lack of raw hide.

**Leather specifications mismatch problem.** Footwear manufacturers are sometimes not aware about which leather is suitable for particular types of footwear to be produced. Knowledge on material issues is not equal among footwear producers. The big ones are very knowledgeable; the mid-size and smaller ones less so. On the other hand, there is no catalogue of products produced by the Tanners Association nor any other information circulated by the Tanners Association on specific products made for specific types of footwear. Furthermore, the Tanners Association does not even have an Official Members Directory mentioning names of factory, their capacities and product specifications.

**Decreasing quality grade.** The quality of finished leather is determined from two different aspects: First is a livestock-to-slaughterhouse stage, where not all livestock is properly treated. During their lives some of them live freely, allowing skin scratches or wounds from insect bites as well as from objects such as tree branches or bushes. In the slaughter house bad execution processes of the livestock create muscle and arterial stress, and also marks on the hides / skins due to the depression of the animals before slaughtering. Also in the slaughterhouse bad flaying process (separation skin / hide from meat), especially if the slaughterhouses use a manual cutting process instead of pulling machines. The manual cuts cause holes on skins / hides and jagged flesh cuts. Finally in the slaughterhouse: the skins / hides are sometimes soaked in water to add more weight to trick the buyer. As a result, whereas Java cow hides had been famous for their soft texture ten years ago, when tanners found it easy to randomly get 40% grade A from a bulk of supply, tanners currently feel lucky to find 30% randomly at grade A. Second is during leather processing. Improper leather processing, such as in the finishing process, can impact the quality of the finished leather product. The use of improper leather chemicals, such as expired chemicals or chemicals mixed with other substance to expand the volume, also impacts quality.

**Price competition between national finished-leather against imported finished leather.** Despite some rumors that national finished leather is more expensive than imported ones, field research shows that national products priced around US\$ 1.78-US\$ 2.28 per sq ft are almost even with imported finished leather that has range of price of US\$ 1.85-US\$ 2.1 per sq ft. However the ranges above cannot be compared in more detail since there is no imported leather made of any foreign cow hide that corresponds exactly with the national products made of Java cow hides in terms of texture, strength, softness, *etc.* Thus, comparing prices will be irrelevant. Some cases from the field also prove that relatively cheaper imported products sometimes come from stock lots (rejects) from factories overseas. Though attractive in price, rejected finished leather products are exposed to possibilities of defect once produced as shoe uppers or may be broken after shoe uppers are assembled.

## 5. RECOMMENDATIONS FOR IMPROVING ACCESS TO RAW MATERIAL INPUTS

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This report has organized recommendations for improving access to raw material inputs by primary constraint:

**1. Inadequate supply problem.** In the short term, to advocate for strong supervision of the implementation of Circulation Letter of Director General of Livestock No. 3177/HK.340/F/08.06 and No. 6035/HK.340/F/11.06, which regulate approval for imported processed leather wet blue, crust and finished leather from epidemic and endemic countries and to advocate for strong supervision of the implementation of Presidential Decree No. 46/1997 that states wet pickled leather, wet blue leather, crust leather and finished-leather arriving in Indonesian ports are not compulsory to have quarantine action. It has been observed in the field that customs still ask for those products to be quarantined despite the fact that the above regulations already approve the importation without compulsory quarantine.

In the long term, to advocate for national development of livestock and to prepare comprehensive planning for Java cow breeding. If it is possible to duplicate some policies from Suharto's era, such as developing livestock research centers and development in certain areas, giving incentives such as soft loans to cow farmers.

**2. Leather specifications mismatch problem.** There are numerous suggests for improving the leather specification mismatch problem:

- To assist the tanners association in preparing an official members directory listing the names of members with addressed, contact details, production capacity, and product specifications.
- To assist the tanners association in preparing a complete product catalogue mentioning the details of their members' current product specifications, some specific knowledge on material issues.
- To facilitate regular technical meetings to bridge the gap of information between tanners and footwear producers.
- To facilitate technical seminars by inviting finished leather experts and experienced leather footwear designers to educate tanners and producers on how to select proper material and to determine specific finished leather for specific types of footwear and for specific parts of footwear.
- To facilitate trend forecasting seminars by inviting experienced leather footwear designers and footwear industry practitioners, because it is not enough only facilitating regular-technical meetings to match finished leather specs and footwear industry demand, since the trends move and change very fast. Thus it is necessary for tanners to have insights regarding trends of leather footwear one season in advance to help them better prepare the designs, material selection and human resources.
- To utilize all networks SENADA already has established, such as IFSC, in developing a finished-leather product catalogue, in facilitating basic training for finished-leather technician and in disseminating technical information and in organizing communications with any possible related institutions, as IFSC has already shown its ability to communicate and coordinate with private and government institutions related with the development of Indonesian footwear industry.

**3. Decreasing quality grade problem.** There are numerous suggests for improving the leather specification mismatch problem:

- Proper education to the farm about how to treat the livestock so the skins / hides have a better value and quality.
- Proper training to the slaughterhouse by introducing and implementing more advanced technology and awareness that the hides / skins are not side products but a valuable product.
- An incentive system based on the raw hides / skins should be developed and implemented to create a willingness to treat livestock properly.
- To facilitate technical seminar by inviting Center for Research of Leather, Rubber and Plastic to educate tanners and producers on the importance of product research, development, testing and certification.
- To facilitate the upgrade of technical knowledge of Researcher and Technicians at the Center for Research of Leather, Rubber and Plastic through inviting experts on related subjects from overseas.
- To advocate for the development of a Pre-Tanning Association as the Indonesian Tanners Association already has a lot of homework to do and the span of value chain is long and complicated. This pre-tanning Association is expected to be able to organize all business units from slaughterhouses to raw hide collectors, co-ordinate with related research institutions to train and develop better methods of cow slaughtering, cow hanging, fleshing, curing, collecting and transporting to tanning factories.

## APPENDIX 1 - BIBLIOGRAPHY

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## APPENDIX 2 – INTERVIEW CONTACT LIST

	Organization Name	IVC	IVC Position	Contact Person	Address	Phone
1	APKI (Asosiasi Penyamak Kulit Indonesia), Head Office	Tannery	Indonesian Tanners Association	Agit Punto Yuwono	Jl. Jembatan Dua No. 14, Jakarta 14450	(21) 6693629
2	APRISINDO (Asosiasi Persepatuan Indonesia) Office	Footwear	Indonesian Footwear Association	Singgih Witarso / Yudhi Komaruddin	Jl. Tanah Abang III No.18, Jakarta 10160	(21) 344-7575
3	BBKKP	Tannery and Footwear	Center for Research of Leather, Rubber and Plastic	Sardjono / Titik Purwati	Jl. Sokonandi No.9, Jogjakarta 55166	(274) 512929
4	APKI (Asosiasi Penyamak Kulit Indonesia)-Garut Chapter	Tannery	Indonesian Tanners Association	M Yusuf Tojiri	Jl. Gagaklumayung No. 123, Garut 44111, West Java	(262) 242276
5	APKI (Asosiasi Penyamak Kulit Indonesia)-Jogjakarta Chapter	Tannery	Indonesian Tanners Association	Diyono Hening Sasmito	Jl. Sonopakis Lor No.159, Jl. Wates Km.3, Jogjakarta	(274) 378463
6	APKI (Asosiasi Penyamak Kulit Indonesia) East Java Chapter	Tannery	Indonesian Tanners Association	Sutjipto Harsono	Jl. Peltu Sujono 12, Malang, Indonesia	(341) 361990
7	IFSC (Pusat Pelayanan Industri Persepatuan Indonesia)	Footwear	Indonesian Footwear Service Center	Ali Mas'ud	Komplek Pasar Wisata Kedensari, Tanggulangin-Sidoarjo-Jawa Timur	(31) 70964170
8	PD Putra Setra	Tannery	Tanning Manufacturer	H Jajang Hermawan	Jl. Jend. Sudirman 26, Garut 44111, West Java	(262) 233860
9	PT Karya Lestari Mandiri	Tannery	Tanning Manufacturer	Nadiman	Jl. Jend. Sudirman km 1, Garut 44111, West Java	(262) 238196
10	UD Linda Jaya	Tannery	Tanning Manufacturer	H Edjeb Setiadi	Jl. Gagaklumayung No. 197, Garut 44111, West Java	(262) 235332
11	Endies Leather Company	Tannery	Tanning Manufacturer	M Yusuf Tojiri	Jl. Gagaklumayung No. 123, Garut 44111, West Java	(262) 242276
12	Arsya Leather	Tannery	Tanning Manufacturer	Ayub Affandi	Jl. Gagaklumayung No. 126, Garut 44111, West Java	(262) 234564
13	Adi Satria Abadi	Tannery	Tanning Manufacturer	Diyono Hening Sasmito	Banyakan, Sitimulyo, Piyungan, Bantul	(274) 7495050

	<b>Organization Name</b>	<b>IVC</b>	<b>IVC Position</b>	<b>Contact Person</b>	<b>Address</b>	<b>Phone</b>
14	PT Budi Makmur Jaya Murni	Tannery	Tanning Manufacturer	Hermelien Yusuf	Jl. Palemen No.9 Rawamangun,	(274) 379035
15	PT Rachbini Leather	Tannery	Tanning Manufacturer	Apandi Widjaja	Jl. A. Yani No. 1 Gedangan-Sidoarjo 61254, East Java	(31) 8543531
16	PT Rajawali Tanjungsari	Tannery	Tanning Manufacturer	Meddy Irianto	Jl. KH Mas Mansyur No.1, Raya Trosobo km 23, Ds Tj Sari, Sidoarjo 61257	(31) 7883494
17	PT Kasin	Tannery		Stephanus Allegro	Jl. Peltu Sujono 25, Malang, East Java	(341) 364403
18	PT Surya Sukmana	Tannery	Tanning Manufacturer	Agustinus Sugito	Jl. Raya Purwosari Km 14, Ds Puntir- Martopuro, Pasuruan, East Java	(343) 611170
19	Ecco Tannery Indonesia	Tannery	Tanning Manufacturer	Safoedi	Jl. Raya Bligo 17, Candi, Sidoarjo 61271, East Java	(31) 8959593
20	Lowenstein Indonesia	Tannery	Chemical Supplier	Mazlan Lubis	Jl. Pluit Raya No.21, Jakarta Utara	(21) 6691575

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