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**April 14-15, 2025 | Nairobi, Kenya**

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**SUDAN CONFLICT CONFERENCE**

# **Impact of Ongoing Conflict in Sudan on Selected Agro-Industries in Greater Khartoum State**

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# The State of Agro-Industries in Greater Khartoum State

# Background



- On April 15, 2025, severe armed conflict erupted in Khartoum State, later spreading to Al-Gazira, Sinar, and Darfur States, with less intense effects in Kordofan, Blue Nile, and White Nile States.
- The conflict has resulted in over 28,700 reported fatalities by the end of November 2024 (ACLED, 2024), and 12.4 million people were forcibly displaced, including 8.8 million internally displaced persons (IDPs) and 3.5 million seeking refuge in neighbouring countries such as Chad, Egypt, Ethiopia, the Central African Republic (CAR), Libya, and South Sudan (UNHCR, 2024).
- Considerable proportion of those who displaced are from Khartoum and Gazira states which constitute together between 31- 35% (World Bank 2023)
- The most affected states in terms of displacement include Khartoum State (31%) (IOM 2024)

# Background: Wheat flour

## WHEAT FLOUR CONSUMPTION:

by the end of Nov 2022 (November 2022, wheat subsidy was lifted), Greater Khartoum hosted approximately 6,000 bakeries, 4,460 were subsidized bread bakeries and around 1,450 commercial bakeries, collectively serving a population of roughly 10 million people. This translates to an average of 1 bakery per 1,700 residents. The state's daily flour consumption ranged from 35,000 to 40,000 50-kg bags—equivalent to 1,750 to 2,000 metric tons of flour per day, or 2,350 to 2,700 metric tons of wheat per day, when adjusted for extraction rate. This consumption was primarily for bread, excluding other wheat-based products such as biscuits, cakes, and pasta. On average, each bakery consumed about 300 kg of flour daily. (Flour Chamber).

## Bread prices:

	Weight	Price
<b>Before the conflict</b>	100- 120 gm	50 SDG
<b>After the conflict</b>	80- 100	125- 142

# Background: Edible oils

Before the onset of the current conflict, Sudan had an estimated 215 oilseed processing units, ranging from small-scale mills to large industrial plants. Importantly, 50–60% of the country's total oil milling capacity was concentrated in Khartoum North Industrial Area and the Al- Bagir Industrial Zone (Soba)

## EDIBLE OIL PRICES

	Sesame oil (Lt)	Ground nut oil (Lt)	Sunflower oil (Lt)	Cotton seed oil (Lt)
Before the conflict	17,000	10,000	10,000	7,000
After the	20,000	12,000	15,000	9,000

# Objective of the study



## **OVERALL OBJECTIVE**

The overall objective of this study is to assess the effects of the ongoing armed conflict on the agro-industrial sector in Greater Khartoum State, with special emphasis on the Khartoum North (Bahri) Industrial Area.

## **SPECIFIC OBJECTIVES**

The specific objectives of this study are categorized into three main areas:

- evaluating the flour mill sector in the Khartoum North Industrial Area
- assessing of the edible oil industrial plants in Khartoum North and Soba Industrial Areas
- exploring the connection between socio-economic and humanitarian conditions resulting from the ongoing conflict

# Methodology



- Sources of information:
  1. Desk review
  2. Satellite image
  3. Technical questionnaire
  4. Site visits
  5. Key informant interviews

# Methodology

## The size of the sample:

Fourteen industrial facilities were assessed in this study, as outlined in the table below.

	Sector	Number of factories
1	Wheat flour mills	4
2	Edible oil factories	9
3	Packing materials factories	1

# Data analyses

- ▶ The analysis of the data follows the pattern below:
  1. **Buildings and IT infrastructure damage:** This encompasses various elements, including damages in administrative building, production lines building and accessory buildings
  2. **Production machineries:** This includes all machineries related in the production lines in addition to the electrical systems
  3. **The production inventory losses:** Consists of three categories: raw material inventories, final product inventories and packing materials inventories.
  4. **The logistics and maintenance asset losses:** Including truck, cars, spare parts, oils and fuels.
  5. **Financial losses:** comprises multiple component including: receivable losses; financing Penalties; foreign exchange losses; labour cost distribution; demurrage and related losses; breach procurement contracts obligations; rental and lease inefficiencies; forgone losses and opportunity cost losses; and good will losses

# Results: Overall damage assessment

- The overall damage assessment estimated at \$ 459,090,940 detailed as the following table:

	Damage and loss	Cost (\$)	Percentage (%)
<b>1</b>	Financial losses	243,349,964	53
<b>2</b>	Inventory losses	106,849,107	23.3
<b>3</b>	Logistics Assets	46,156,840	10.1
<b>4</b>	Damages in buildings	37,385,257	8.1
<b>5</b>	Damages in machinery	25,349,772	5.5
	Total	459,090,940	100

# Results: Overall damage assessment

- ▶ The breakdown of losses and damage between the three sectors:

Sector	Wheat flour mills sector (USD)- 4	%	Edible oil sector (USD)- 9	%	Packing material sector (USD)- 1	%
Damages and losses	262,111,617	57.1	195,679,922	42.6	1,339,401	0.3

# Results: Overall damage assessment

## ➤ Estimated time of repair

### Estimated time frame for different types of repairs in Wheat flour mills

Type of Machinery	Minimum Item Estimated Repair Time	Average Item Estimated Repair Time	Maximum Item Estimated Repair Time
Electrical Systems Losses	3.00	5.77	6.00
Milling Process & Pneumatic	3.00	5.22	6.00
Packaging & handling System	3.00	3.75	6.00
Utilities, Surveillance, IT, Quality & Firefighting Losses	3.00	3.00	3.00
Wheat conditioning & Preparation	3.00	4.00	6.00
Wheat handling & storage facilities	3.00	3.75	6.00

### Estimated time frame for different types of repairs in Edible oil factories

Type of Machinery	Minimum Item Estimated Repair Time	Average Item Estimated Repair Time	Maximum Item Estimated Repair Time
Auxiliaries	3.00	3.00	3.00
Electricity	4.00	5.96	7.00
Filling & Packing	1.00	4.00	6.00
Handeling, Storage, Cleaning & Preparation	1.00	1.00	1.00
Oil Mills	1.00	3.60	6.00
Refinery	1.00	1.00	1.00
Seed Handeling & Preparation	6.00	6.00	6.00
Solvent Extraction	1.00	1.67	3.00

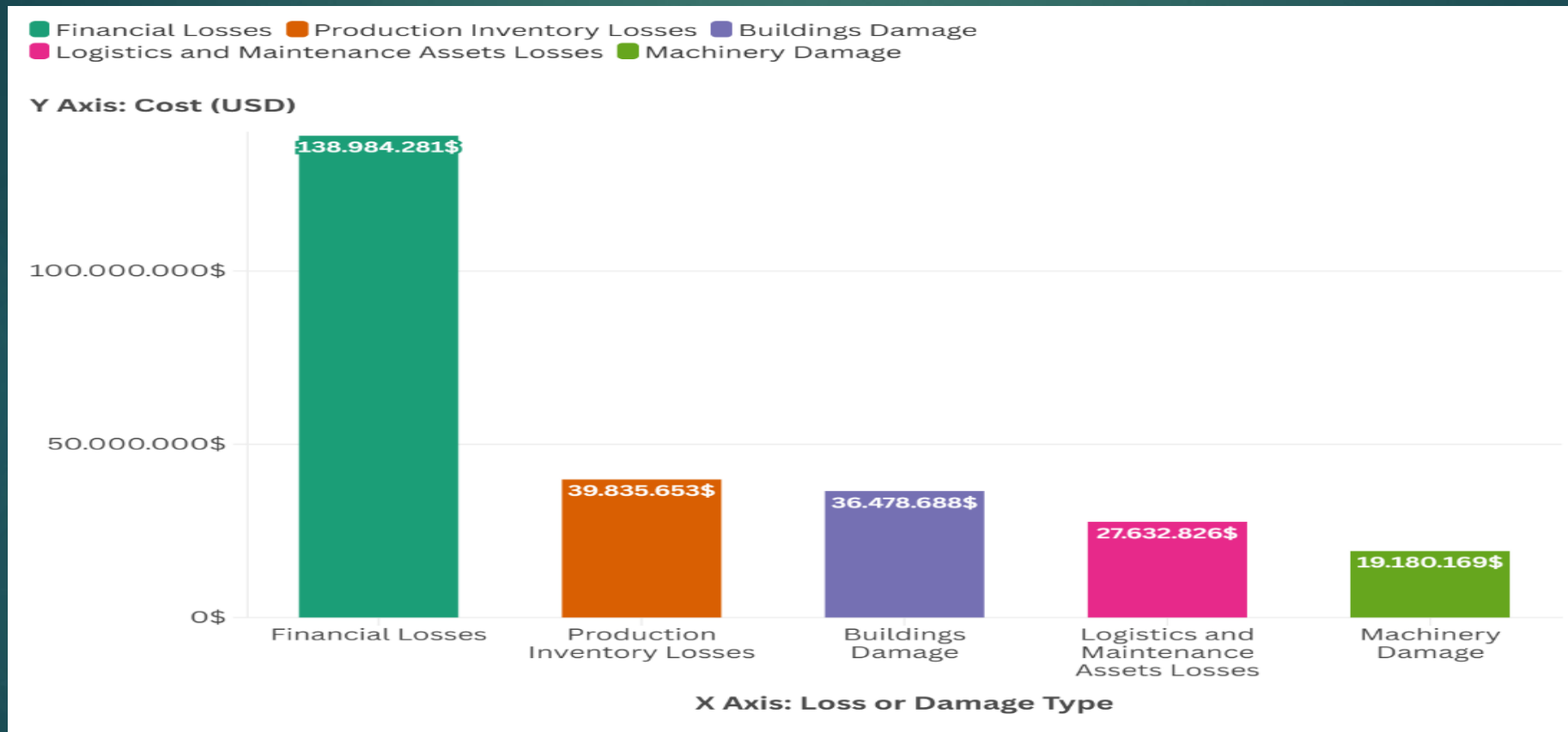
# Results: Wheat flour mills sector (4 Factories)

The breakdown of the estimated losses and damages in this sector is as follows:

	Damage and loss	Cost (\$)	Percentage (%)
1	Financial losses	138,984,281	53
2	Inventory losses	39,835,653	15
3	Logistics Assets	27,632,826	11
4	Damages in buildings	36,478,688	14
5	Damages in machinery	19,180,169	7
	Total	262,111,617	100

# Results: Wheat flour mills sector (4 Factories)

## Types of losses and damages



# Results: Wheat flour mills sector (4 Factories)

- ▶ Damages and losses cost per production ton/day in wheat flour sector

	Building Damage	Machinery Damage	Logistics and Maintenance Assets Losses	Production Inventory Losses	Financial Losses	Total
<b>Cost per ton/ day</b>	\$6,948	\$3,653	\$5,263	\$7,588	\$26,474	49,926
<b>Total</b>	\$36,478,688	\$19,180,169	\$27,632,826	\$39,835,653	\$138,984,281	262,111.617

# Results: Wheat flour mills sector (4 Factories)

▶ Estimated time repair

Building type	Minimum repair time (Month)	Average repair time (Month)	Maximum repair time (Month)
<b>Buildings damages</b>	<b>2</b>	<b>5.8</b>	<b>10</b>
<b>Machinery damages</b>	<b>3</b>	<b>4</b>	<b>6</b>

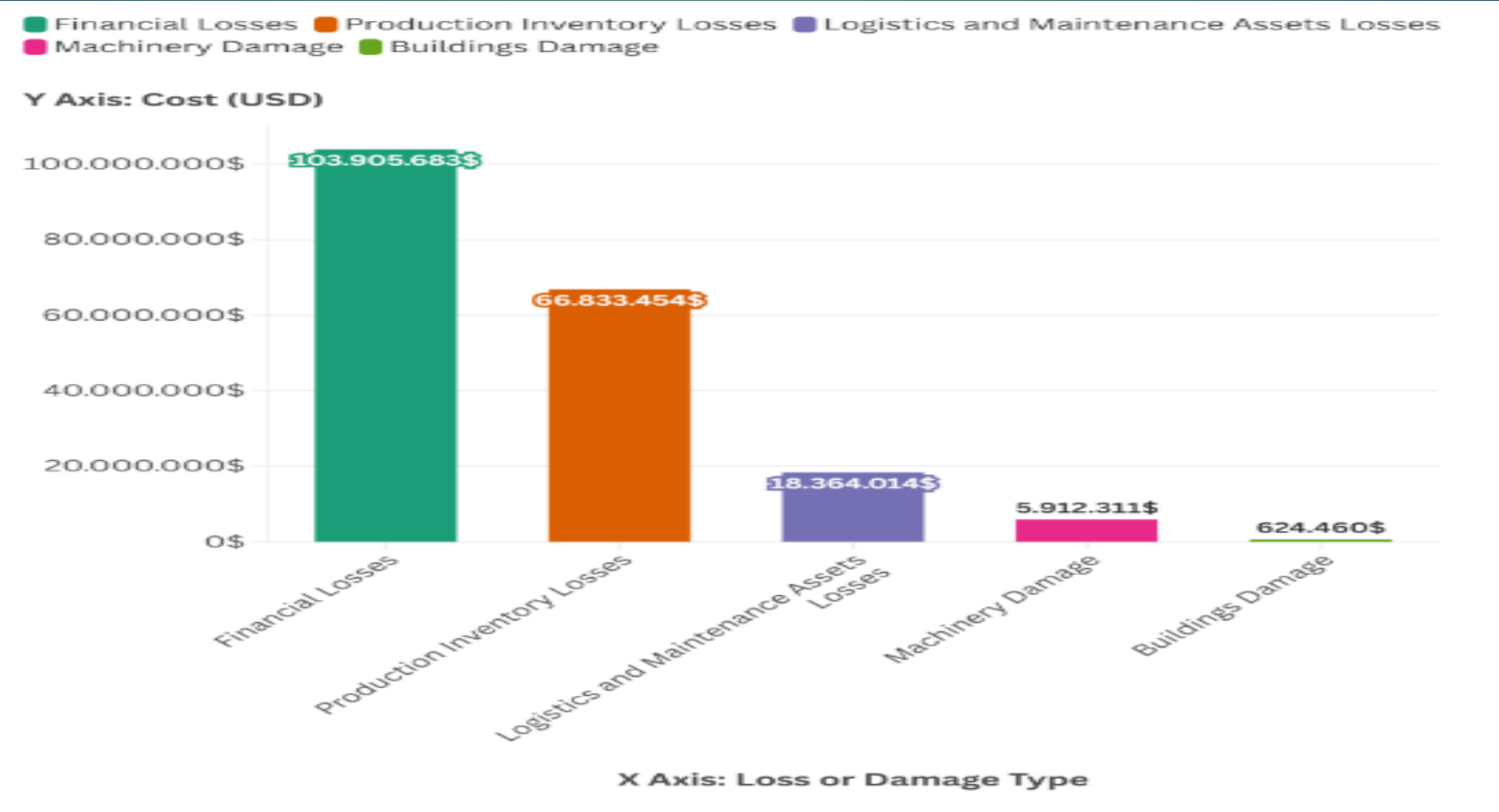
# Results: Edible oil sector (9 Factories)

The breakdown of the estimated losses and damages in this sector is as follows:

	Damage and loss	Cost (\$)	Percentage (%)
1	Financial losses	103,905,683	53.2
2	Inventory losses	66,833,454	34.1
3	Logistics Assets	18,364,014	9.4
4	Damages in buildings	624,460	0.3
5	Damages in machinery	5,912,311	3.0
	Total	195,679,922	100

# Results: Edible oil sector (9 Factories)

➤ Types of losses and damages



# Results: Edible oil sector (9 Factories)

- ▶ Damage and losses cost per productive ton/day in edible oil sector

	Building Damage (\$)	Machinery Damage (\$)	Logistics Maintenance Assets Losses (\$)	and Production Inventory Losses (\$)	Financial Losses (\$)	Total (\$)
<b>Cost Per Production Capacity (MT/day)</b>	<b>231</b>	<b>2,186</b>	<b>6,789</b>	<b>24,707</b>	<b>38,412</b>	<b>72,325</b>
<b>Total</b>	<b>624,460</b>	<b>5,912,311</b>	<b>18,364,014</b>	<b>66,833,454</b>	<b>103,905,683</b>	<b>195,639,922</b>

# Results: Edible oil sector (9 Factories)

► *The estimated time of repairs in edible oil sector*

Building Type	Min of Repair Time (Month)	Average of Repair Time (Month)	Max of Repair Time (Month)
<b>Buildings damages</b>	<b>1</b>	<b>4.4</b>	<b>7</b>
<b>Machinery damages</b>	<b>3</b>	<b>5.9</b>	<b>7</b>

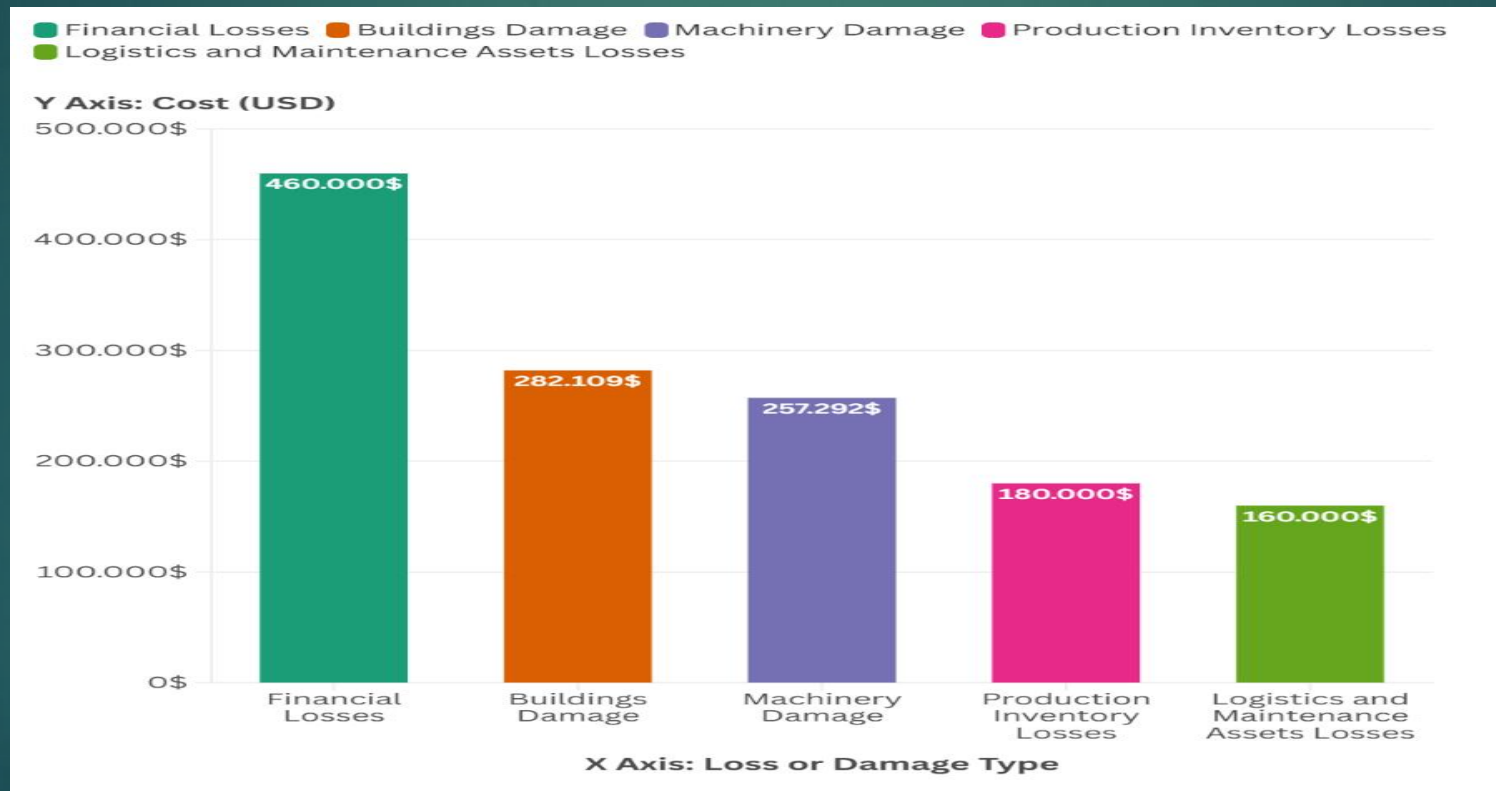
# Results: Packing materials sector (One Factory)

The breakdown of the estimated losses and damages in this sector is as follows:

Category	Estimated cost	Percentage (%)
<b>Building damages</b>	282,109	21
<b>Machinery damage</b>	257,292	19
<b>Production inventory losses</b>	180,000	13.5
<b>Logistics and maintenance assets losses</b>	160,000	12.5
<b>Financial losses</b>	460,000	34
<b>Total</b>	1,339,401	100

# Results: Packing Materials sector (One Factory)

- ▶ Estimated damages and losses in packing materials sector





Utility - transformer damage



silos shot firing with holes



electrical cable theft



building roof theft



Transformer damage

# Issues to be considered



1. SECURITY MEASURES IN INDUSTRIAL AREAS
2. FINANCING AND INSTITUTIONAL SUPPORT
3. EXEMPTIONS FOR REHABILITATION EQUIPMENT
4. COUNTERFEIT GOODS AND UNFAIR COMPETITION
5. LABOR ISSUES AND LEGAL OBLIGATIONS
6. TAX RELIEF AND EMERGENCY LAW CHALLENGES
7. OIL REFINERY PERMITS AND LOCAL PRODUCTION POLICY:

# Recommendation

- ▶ *Private sector Representation*
- ▶ *Law Enforcement and Policy Support*
- ▶ *Economic and Financial Support*
- ▶ *Labor Force*

**Thank you**