（公 3-02）

輸送貨物の事故情報に関するデータベース

報 告 書

2025 年 3 月 31 日

一般社団法人　日本海事検定協会

NIPPON KAIJI KENTEI (THAILAND) LIMITED

I. DATA BASE OF DAMAGE CARGO (Data Analysis of 2023)

（Nippon Kaiji Kentei (Thailand) Limited）

31 MARCH 2025

DATABASE OF DAMAGE CARGO

DATA ANALYSIS OF 2023

PRODUCED BY NKKT

CONTENTS

1. Introduction

The purpose of this database is to organize past accident information, analyze the type of damaged cargo, accident characteristics and trends, cause of accident, etc., examine the accident countermeasures.

2. Database Subject

The subject in this database included damage cases in 2023, which were carried as directly request or as a third-party inspection agency for import shipment, and we extracted and analyzed it, mainly for container cargo.

This database consists of data collected under the above conditions, and it is only a reference value because it is a part of import cargo accidents and is not complete.
In addition, this data does not represent the frequency of accidents in cargo imported into Thailand, as it only contains information on accidents which have been inspected by NKKT.

3. Database Categories

Transportation method:

- Vessel
- Flight
- Train
- Truck
- Other Method

Cargo Categories:

- Food
- Machinery
- Paper
- Chemical Product
- Metal Material
- Steel
- Electrical Product
- Agricultural Product
- Fabric Product
- Plastic

Packages:

- Bare
- Wooden Case
- Bag
- Carton
- Palletized
- Drum
- Bulk
- Roll
- Bundle
- Steel Case
- Aluminate Sheet

Location where damage occurred:

- Storage at Loading Port
- Loading Operation
- Vanning Operation
- Inland Transportation
- In Transit
- Transshipping
- Unloading Operation
- Devanning Operation
- Storage at Discharging Port
- Storage at Airport
- During Processing

Damage type:

- Deformed
- Leakage
- Torn
- Wet by Sea Water
- Wet by Fresh Water
- Humidity and/or Temperature change gap
- Molded
- Rusted
- Stained
- Oxidized
- Contaminated
- Deteriorated

- Missing/Non-delivery/Pilferage
- Operation Failure/Malfunction
- Burnt
- Quality Degraded
- Discrepancy
- Melted/Thaw

Cause of damage:

- Impact/Shock during transportation
- Rough handling
- Container sustained damage/malfunction
- Poor Lashing
- Improper Stowage/Loading
- Poor cleaning
- Fire
- Rise in Temperature
- Humidity change/Temperature change gap
- Cargo nature
- Vessel/Container Submerge
- Thief
- Defective cargo hold
- Improper Storage
- Delay of the vessel

4. Detail damage case based on cargo types

1. Summary of Type of Damage in 2023

Type of Damage	Ratio
Contaminated	5.46%
Deformed	47.56%
Deteriorated	3.12%
Leakage	1.17%
Missing/Non-delivery/Pilferage	0.78%
Molded	0.39%
Operation Failure/Malfunction	0.39%
Rusted	7.02%
Stained	3.51%
Torn	11.31%
Wet by Fresh Water	8.19%
Wet by Sea Water	1.75%
Humidity and/or Temperature change gap	7.02%
Melted/Thaw	0.78%
Burnt	1.56%
Total	100.00%

Table 1: Summary of Type of damage in 2023

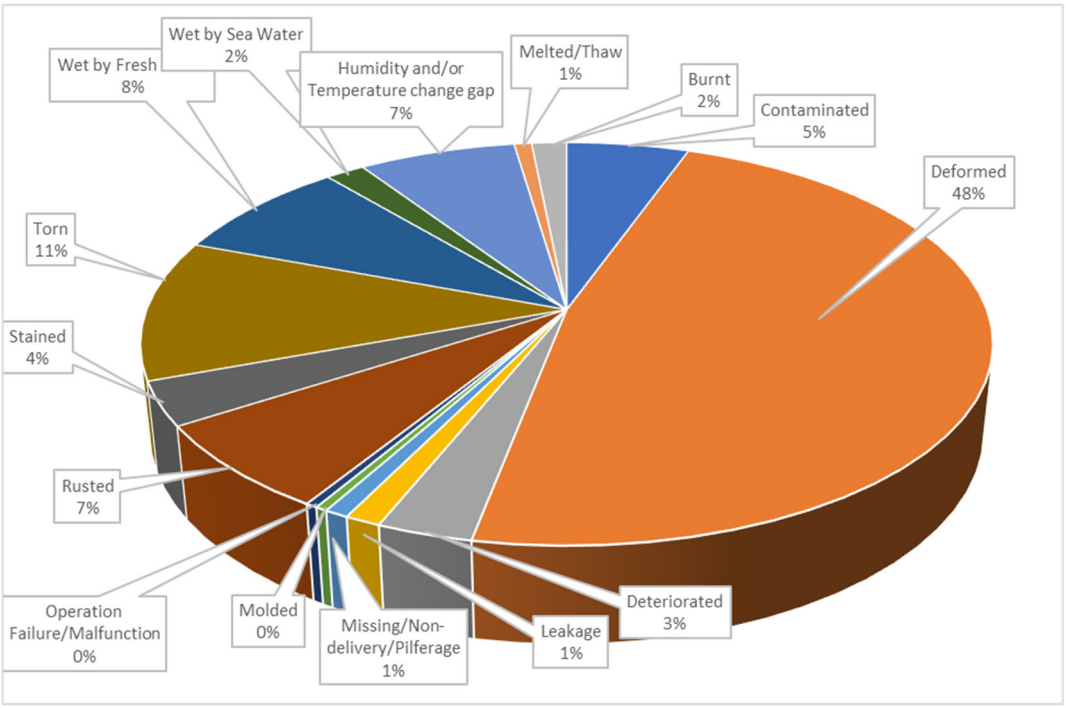

Chart 1: Summary of Type of damage in 2022

2. Food

[2-1] Type of damage

Type of Damage	Ratio
Contaminated	3.85%
Deformed	7.69%
Deteriorated	50.00%
Torn	3.85%
Wet by Fresh Water	11.54%
Wet by Sea Water	3.85%
Humidity and/or Temperature change gap	7.69%
Melted/Thaw	11.54%
Total	100.00%

Table 2-1: Type of damage to Food cargo

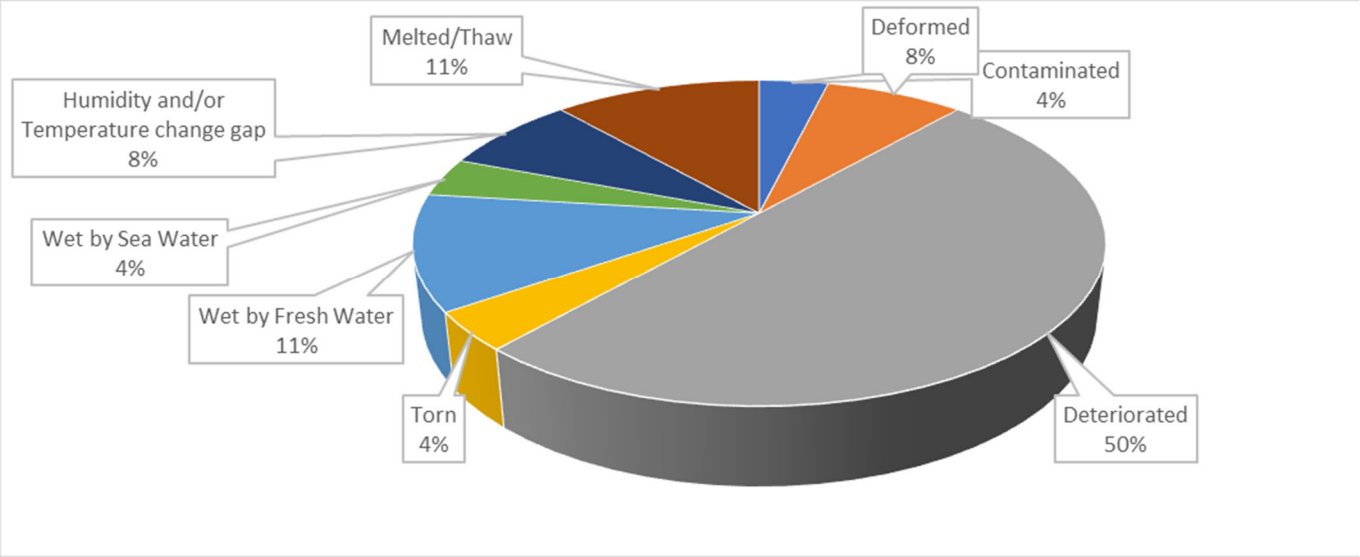

Chart 2-1: Type of damage to Food cargo

[2-2] Location of damage occurred

Occurred location	Ratio
In Transit	92.31%
Inland Transportation	3.85%
Vanning Operation	3.85%
Total	100.00%

Table 2-2: Location of damage occurred of Food cargo

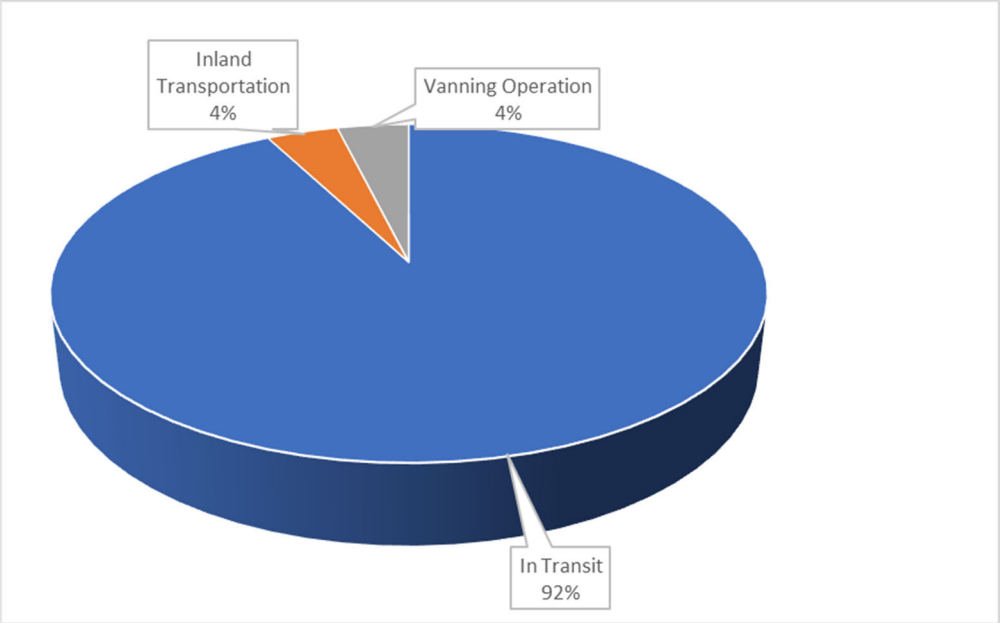

Chart 2-2: Location of damage occurred of Food cargo

[2-3] Cause of damage

Cause of damage	Ratio
Container sustained damage/malfunction	42.31%
Impact/Shock during transportation	11.54%
Improper Storage	7.69%
Improper Stowage/Loading	7.69%
Rise in Temperature	23.08%
Rough handling	3.85%
Vessel/Container Submerge	3.85%
Total	100.00%

Table 2-3: Cause of damage of Food cargo

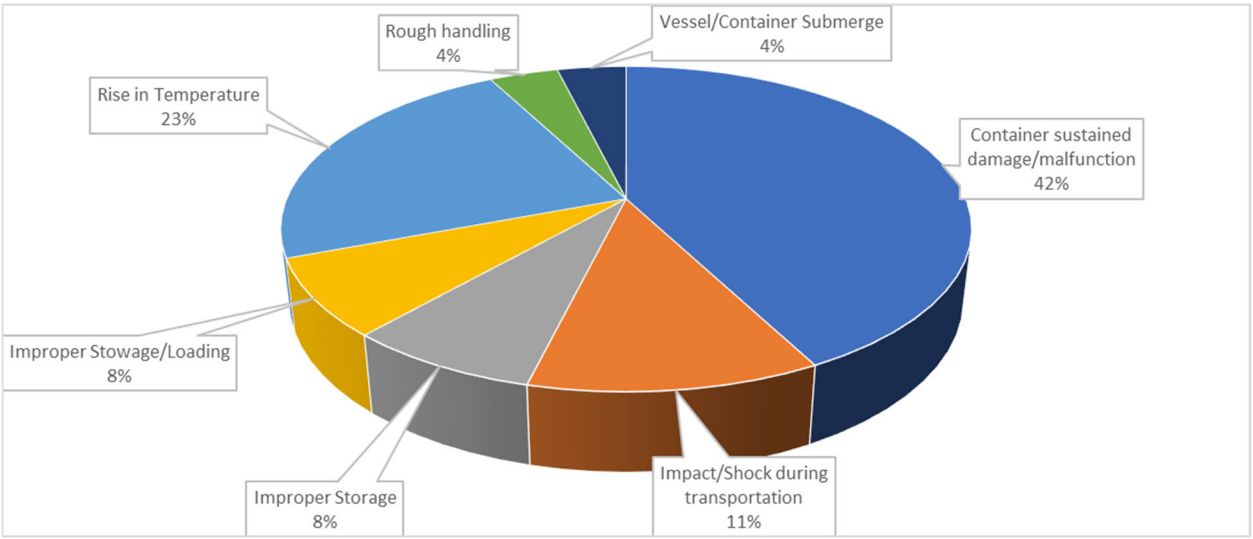

Chart 2-3: Cause of damage of Food cargo

3. Machinery

[3-1] Type of damage

Type of Damage	Ratio
Deformed	57.55%
Leakage	0.94%
Molded	1.89%
Rusted	5.66%
Stained	5.66%
Torn	0.94%
Wet by Sea Water	3.77%
Humidity and/or Temperature change gap	17.92%
Burnt	5.66%
Total	100.00%

Table 3-1: Type of damage to Machinery cargo

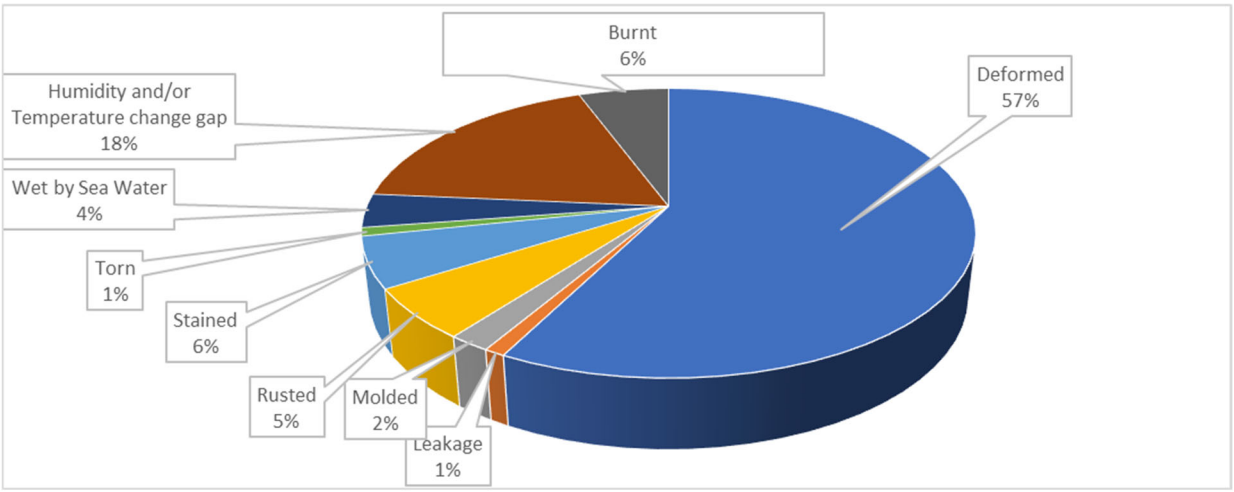

Chart 3-1: Type of damage to Machinery cargo

[3-2] Location of damage occurred

Occurred location	Ratio
Devanning Operation	1.89%
In Transit	60.38%
Inland Transportation	15.09%
Loading Operation	0.94%
Storage at Discharging Port	14.15%
Storage at Loading Port	3.77%
Transshipping	2.83%
Unloading Operation	0.94%
Total	100.00%

Table 3-2: Location of damage occurred of Machinery cargo

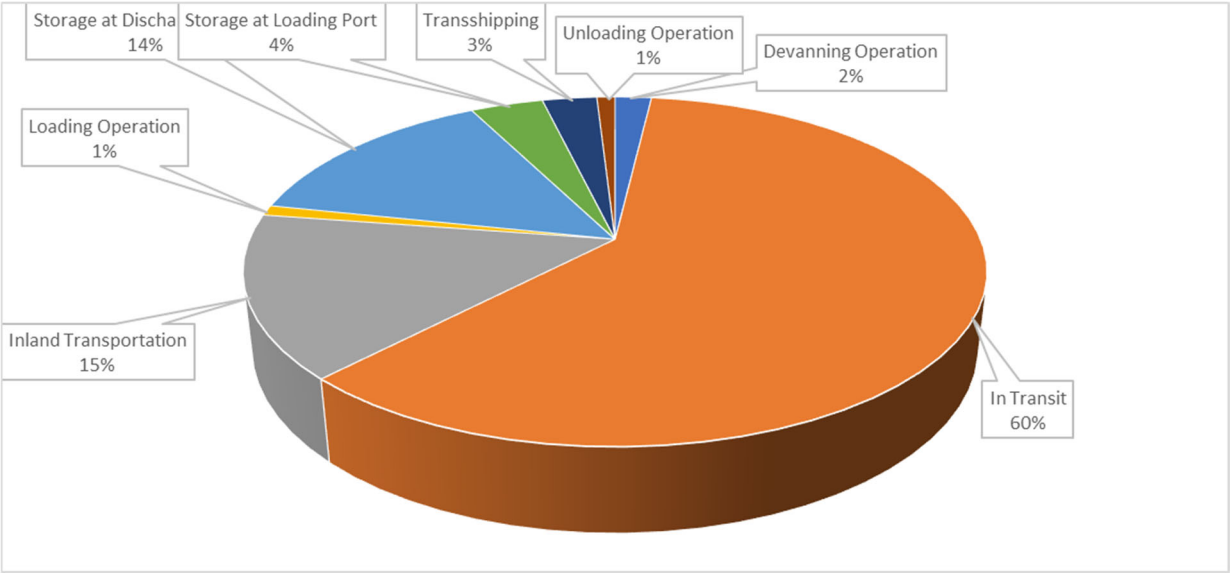

Chart 3-2: Location of damage occurred of Machinery cargo

[3-3] Cause of damage

Cause of damage	Ratio
Container sustained damage/malfunction	3.77%
Humidity change/Temperature change gap	5.66%
Impact/Shock during transportation	40.57%
Improper Storage	3.77%
Improper Stowage/Loading	0.94%
Rise in Temperature	15.09%
Rough handling	20.75%
Vessel/Container Submerge	3.77%
Fire	5.66%
Total	100.00%

Table 3-3: Cause of damage of Machinery cargo

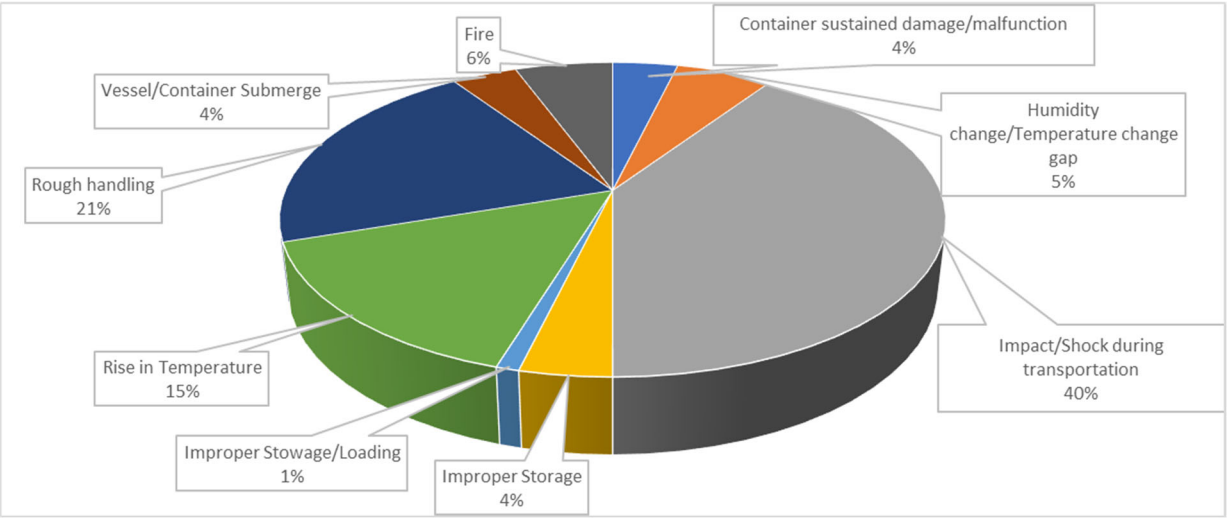

Chart 3-3: Cause of damage of Machinery cargo

4. Paper

[4-1] Type of damage

Type of Damage	Ratio
Contaminated	5.88%
Deformed	76.47%
Operation Failure/Malfunction	5.88%
Stained	5.88%
Torn	5.88%
Total	100.00%

Table 4-1: Type of damage of Paper cargo

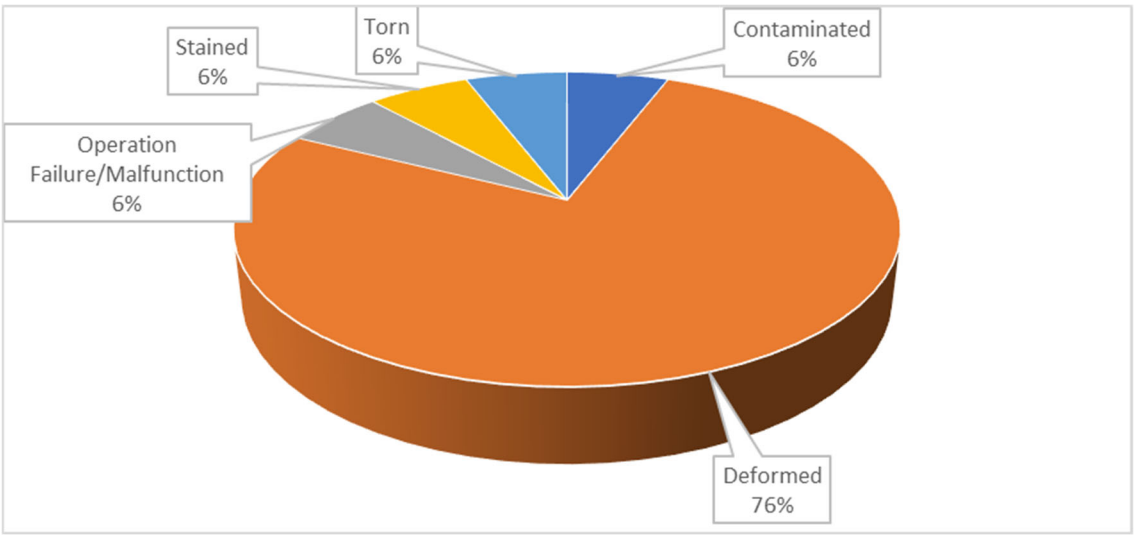

Chart 4-1: Type of damage of Paper cargo

[4-2] Location of damage occurred

Occurred location	Ratio
Devanning Operation	11.76%
In Transit	58.82%
Storage at Loading Port	5.88%
Vanning Operation	23.53%
Total	100.00%

Table 4-2: Location of damage occurred of Paper cargo

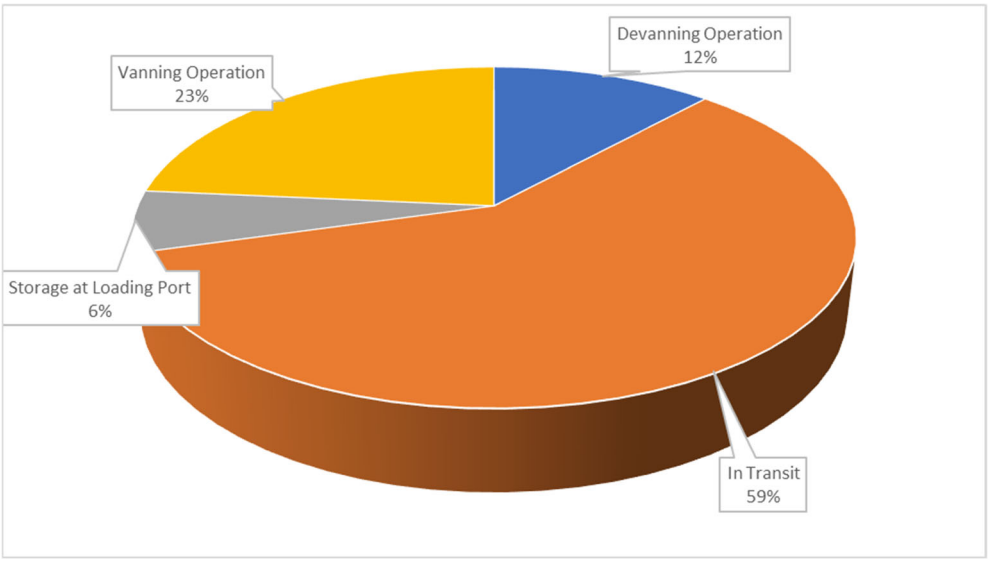

Chart 4-2: Location of damage occurred of Paper cargo

[4-3] Cause of damage

Cause of damage	Ratio
Container sustained damage/malfunction	5.88%
Impact/Shock during transportation	5.88%
Rough handling	88.24%
Total	100.00%

Table 4-3: Cause of damage of Paper cargo

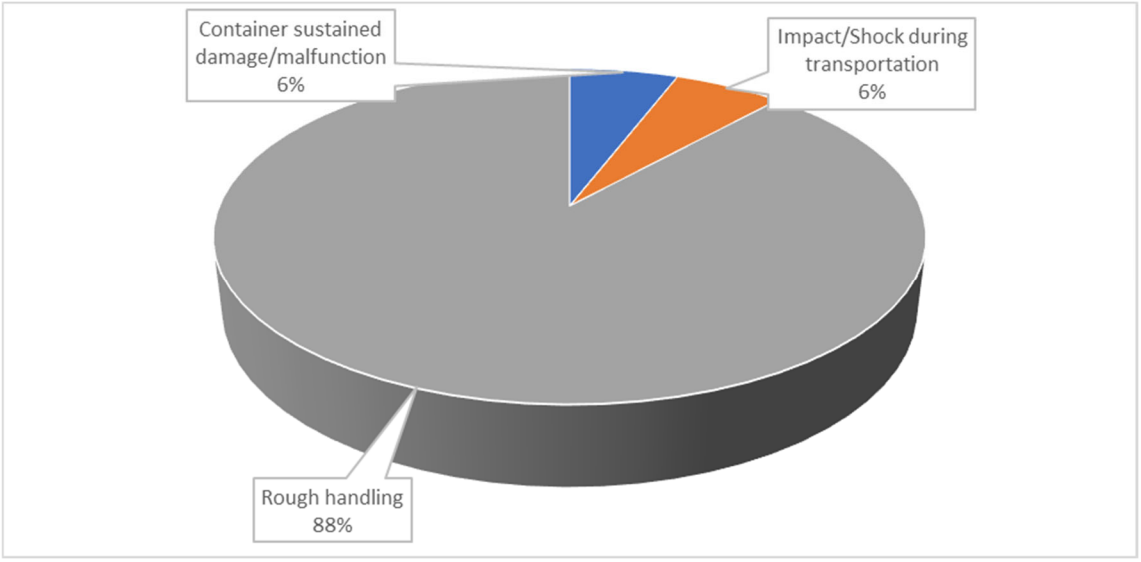

Chart 4-3: Cause of damage of Paper cargo

5. Chemical Product

[5-1] Type of damage

Type of Damage	Ratio
Contaminated	44.83%
Deformed	12.07%
Deteriorated	1.72%
Leakage	6.90%
Missing/Non-delivery/Pilferage	3.45%
Rusted	6.90%
Stained	1.72%
Torn	5.17%
Wet by Fresh Water	5.17%
Wet by Sea Water	1.72%
Humidity and/or Temperature change gap	6.90%
Burnt	3.45%
Total	100.00%

Table 5-1: Type of damage of Chemical Product

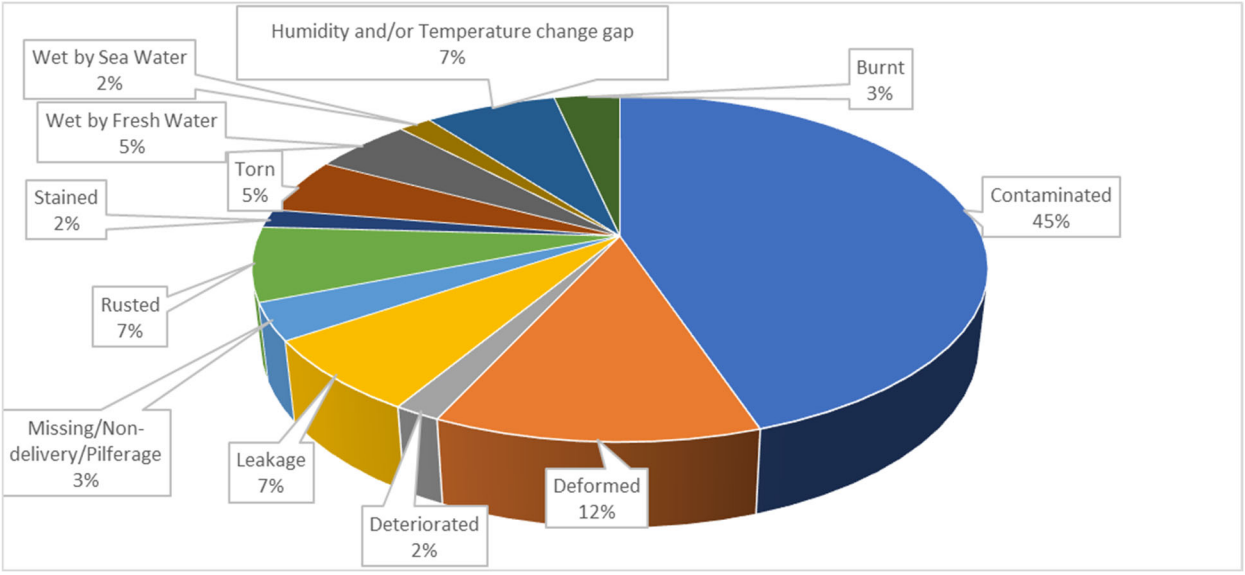

Chart 5-1: Type of damage of Chemical Product

[5-2] Location of damage occurred

Occurred location	Ratio
Devanning Operation	1.72%
In Transit	37.93%
Inland Transportation	5.17%
Loading Operation	1.72%
Storage at Discharging Port	5.17%
Transshipping	6.90%
Unloading Operation	37.93%
Vanning Operation	3.45%
Total	100.00%

Table 5-2: Location of damage occurred of Chemical Product

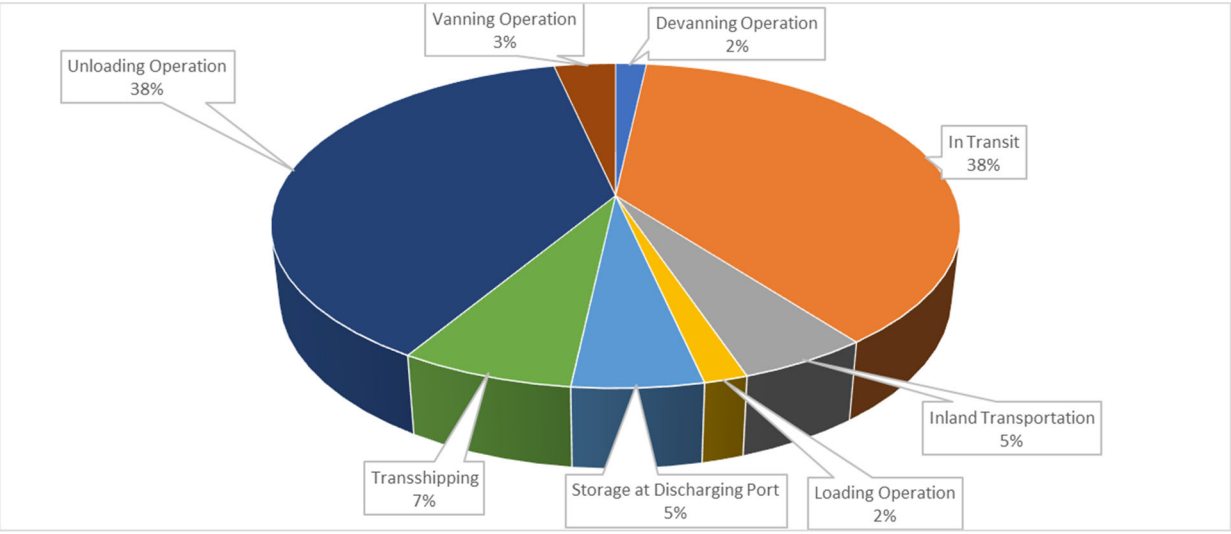

Chart 5-2: Location of damage occurred of Chemical Product

[5-3] Cause of damage

Cause of damage	Ratio
Container sustained damage/malfunction	1.72%
Defective cargo hold	51.72%
Humidity change/Temperature change gap	5.17%
Impact/Shock during transportation	6.90%
Improper Storage	5.17%
Improper Stowage/Loading	5.17%
Poor cleaning	1.72%
Rough handling	18.97%
Fire	3.45%
Total	100.00%

Table 5-3: Cause of damage of Chemical Product

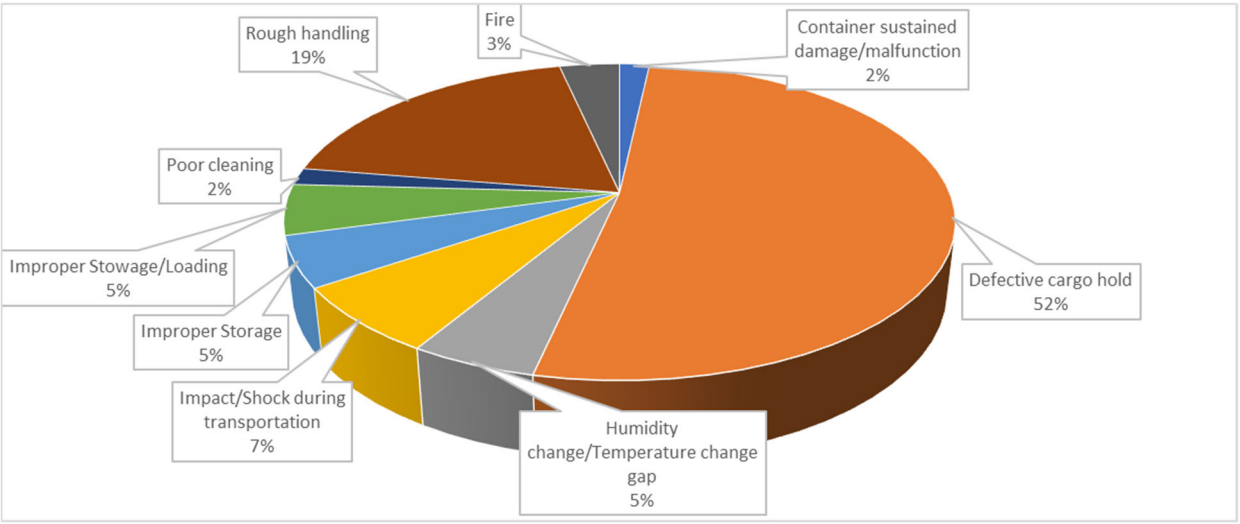

Chart 5-3: Cause of damage of Chemical Product

6. Metal Material

[6-1] Type of damage

Type of Damage	Ratio
Deformed	54.17%
Missing/Non-delivery/Pilferage	4.17%
Stained	20.83%
Torn	8.33%
Wet by Fresh Water	8.33%
Wet by Sea Water	4.17%
Total	100.00%

Table 6-1: Type of damage of Metal Material

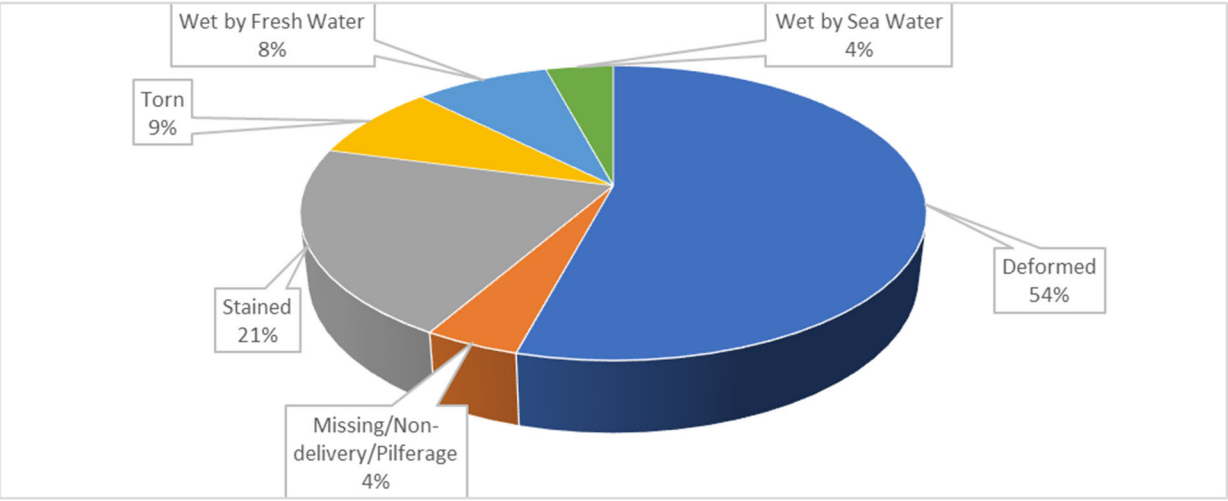

Chart 6-1: Type of damage of Metal Material

[6-2] Location of damage occurred

Occurred location	Ratio
Devanning Operation	16.67%
In Transit	37.50%
Inland Transportation	4.17%
Storage at Discharging Port	8.33%
Storage at Loading Port	25.00%
Transshipping	4.17%
Vanning Operation	4.17%
Total	100.00%

Table 6-2: Location of damage occurred of Metal Material

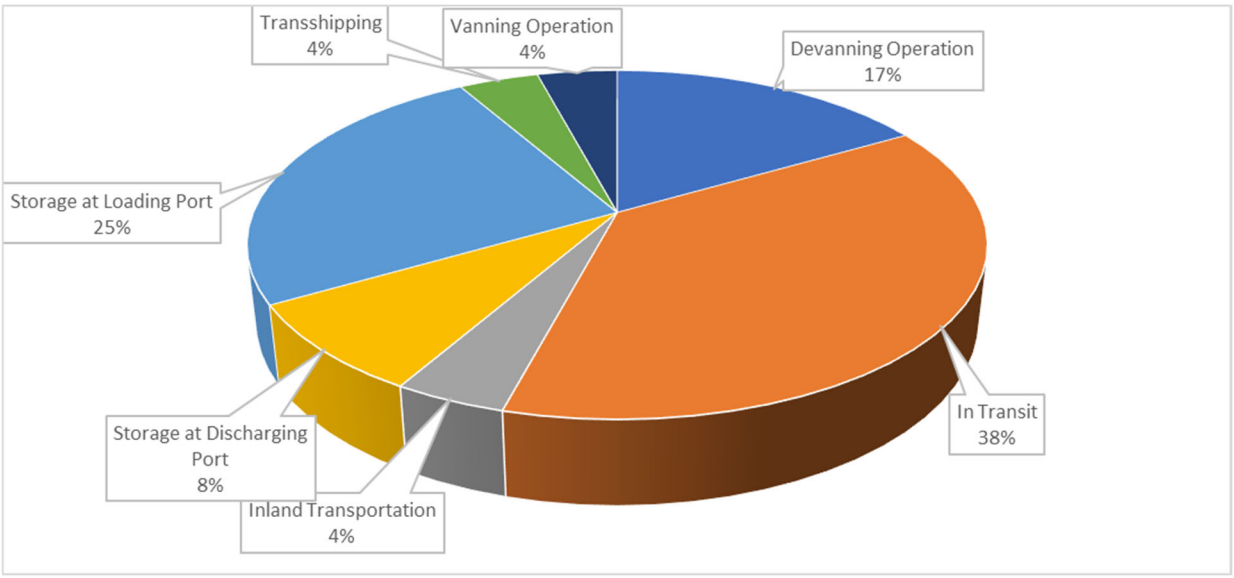

Chart 6-2: Location of damage occurred of Metal Material

[6-3] Cause of damage

Cause of damage	Ratio
Container sustained damage/malfunction	16.67%
Defective cargo hold	4.17%
Impact/Shock during transportation	16.67%
Improper Storage	20.83%
Rough handling	37.50%
Thief	4.17%
Total	100.00%

Table 6-3: Cause of damage of Metal Material

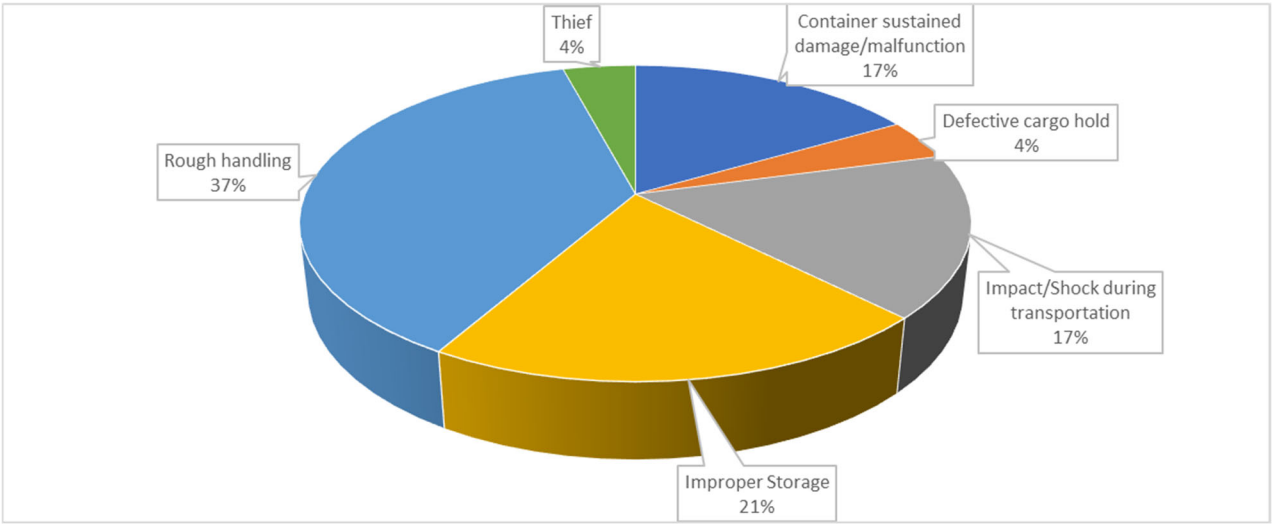

Chart 6-3: Cause of damage of Metal Material

7. Steel

[7-1] Type of damage

Type of Damage	Ratio
Deformed	53.30%
Rusted	12.26%
Torn	20.75%
Wet by Fresh Water	8.96%
Wet by Sea Water	0.94%
Humidity and/or Temperature change gap	3.77%
Total	100.00%

Table 7-1: Type of damage of Steel cargo

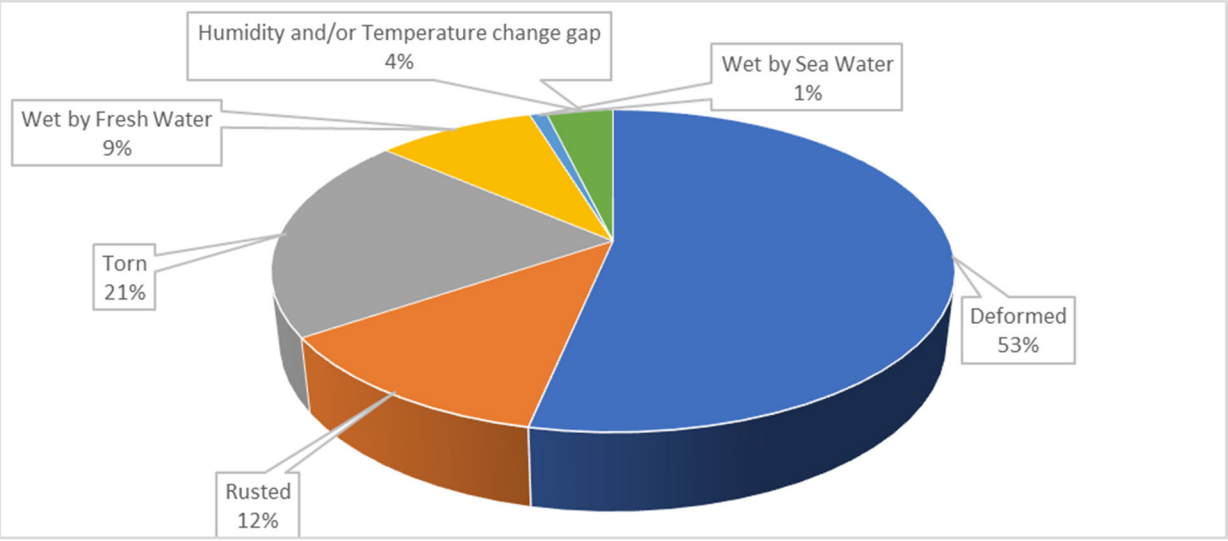

Chart 7-1: Type of damage of Steel cargo

[7-2] Location of damage occurred

Occurred location	Ratio
Devanning Operation	1.89%
In Transit	94.81%
Inland Transportation	0.47%
Transshipping	0.94%
Unloading Operation	0.47%
Vanning Operation	0.94%
During Processing	0.47%
Total	100.00%

Table 7-2: Location of damage occurred of Steel cargo

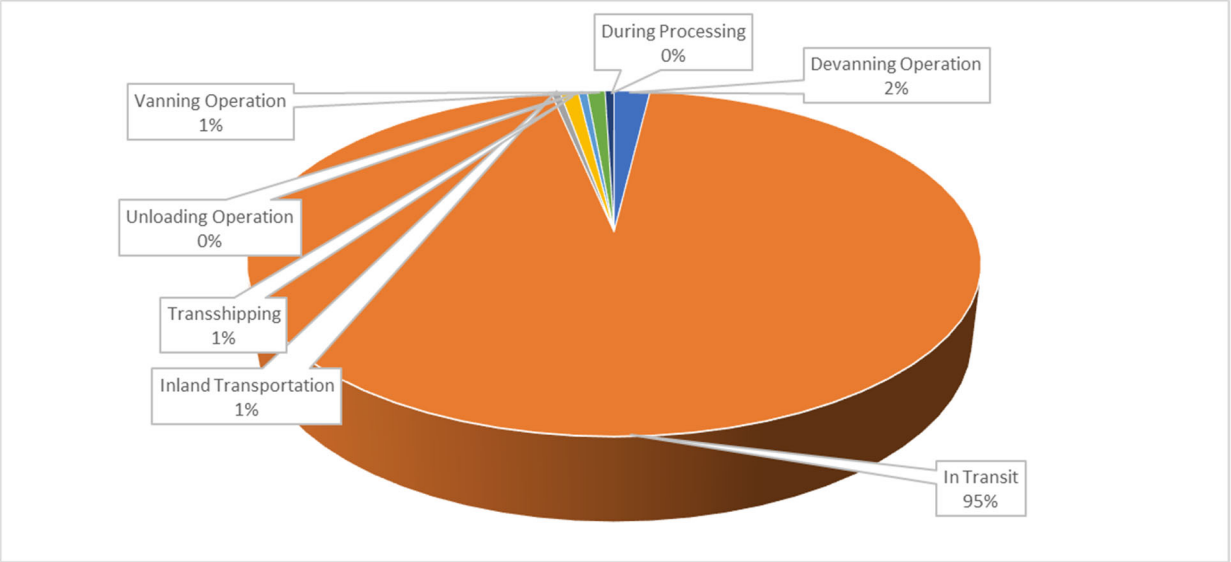

Chart 7-2: Location of damage occurred of Steel cargo

[7-3] Cause of damage

Cause of damage	Ratio
Container sustained damage/malfunction	10.38%
Humidity change/Temperature change gap	5.66%
Impact/Shock during transportation	13.21%
Improper Storage	2.83%
Improper Stowage/Loading	5.66%
Rise in Temperature	2.36%
Rough handling	58.96%
Vessel/Container Submerge	0.94%
Total	100.00%

Table 7-3: Cause of damage of Steel cargo

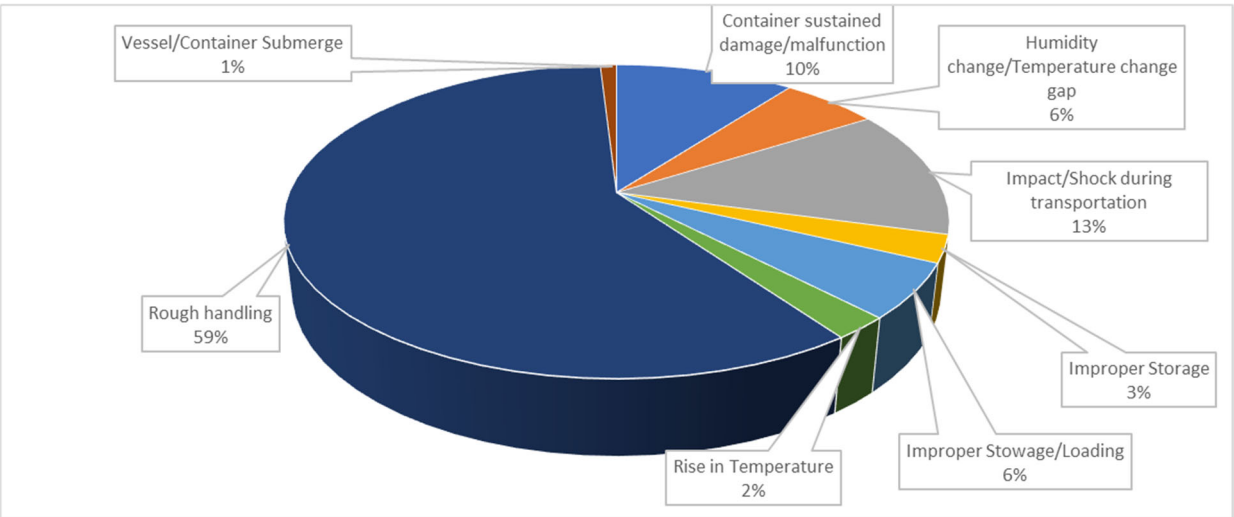

Chart 7-3: Cause of damage of Steel cargo

8. Electric Product

[8-1] Type of damage

Type of Damage	Ratio
Contaminated	1.52%
Deformed	48.48%
Operation Failure/Malfunction	3.03%
Torn	3.03%
Wet by Fresh Water	42.42%
Wet by Sea Water	1.52%
Total	100.00%

Table 8-1: Type of damage of Electric product

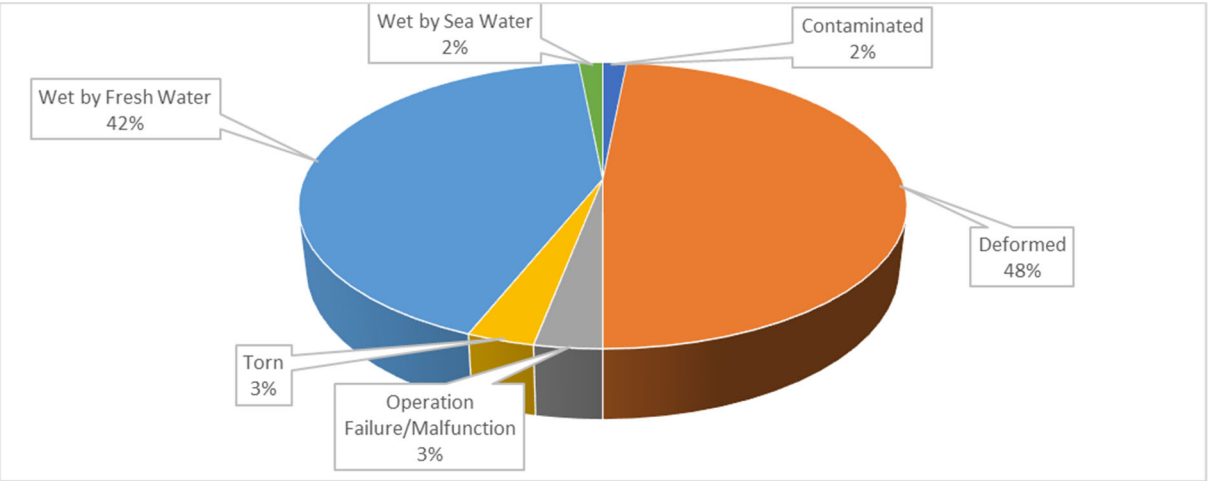

Chart 8-1: Type of damage of Electric product

[8-2] Location of damage occurred

Occurred location	Ratio
Devanning Operation	7.32%
In Transit	82.93%
Inland Transportation	4.88%
Storage at Loading Port	2.44%
Vanning Operation	2.44%
Total	100.00%

Table 8-2: Location of damage occurred of Electric product

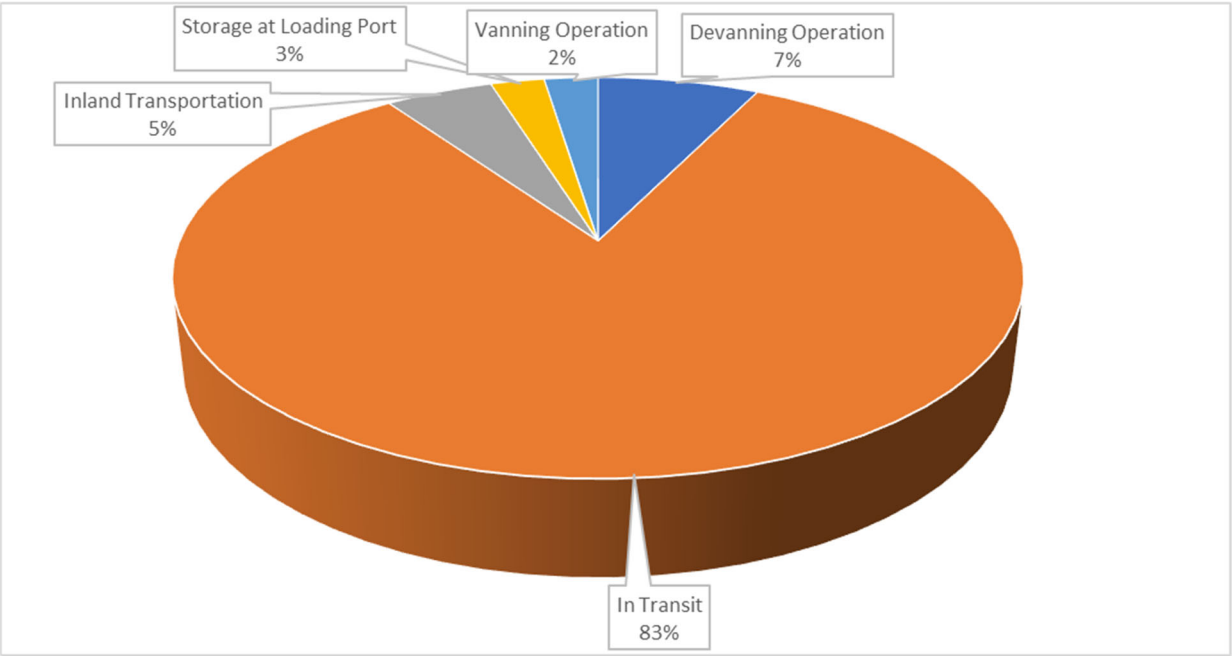

Chart 8-2: Location of damage occurred of Electric product

[8-3] Cause of damage

Cause of damage	Ratio
Container sustained damage/malfunction	26.83%
Humidity change/Temperature change gap	2.44%
Impact/Shock during transportation	14.63%
Improper Stowage/Loading	2.44%
Rough handling	53.66%
Total	100.00%

Table 8-3: Cause of damage of Electric product

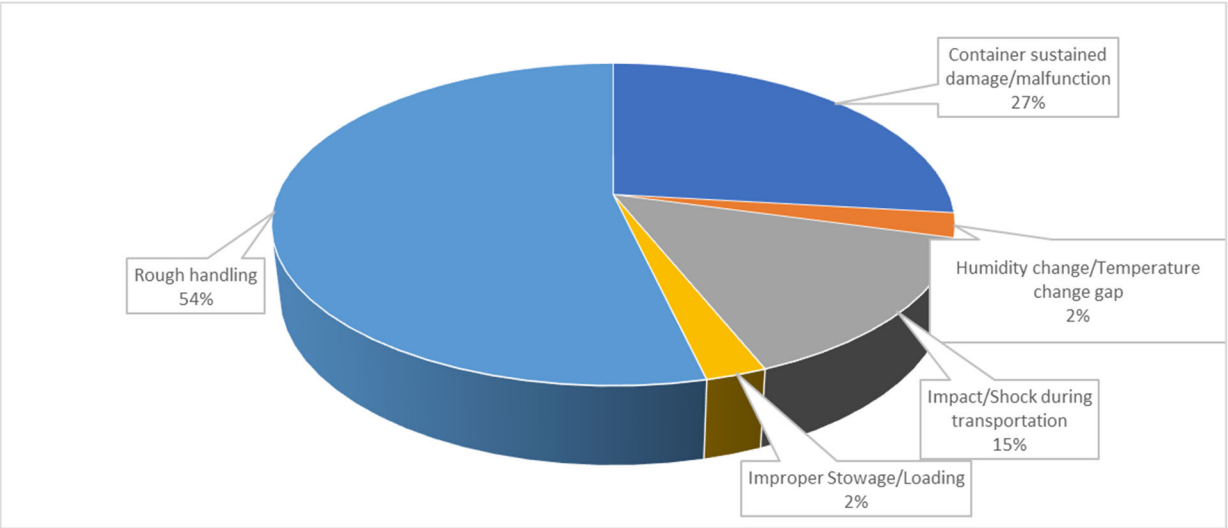

Chart 8-3: Cause of damage of Electric product

9. Agricultural Product

[9-1] Type of damage

Type of Damage	Ratio
Deteriorated	66.67%
Leakage	33.33%
Total	100.00%

Table 9-1: Type of damage of Agricultural Product

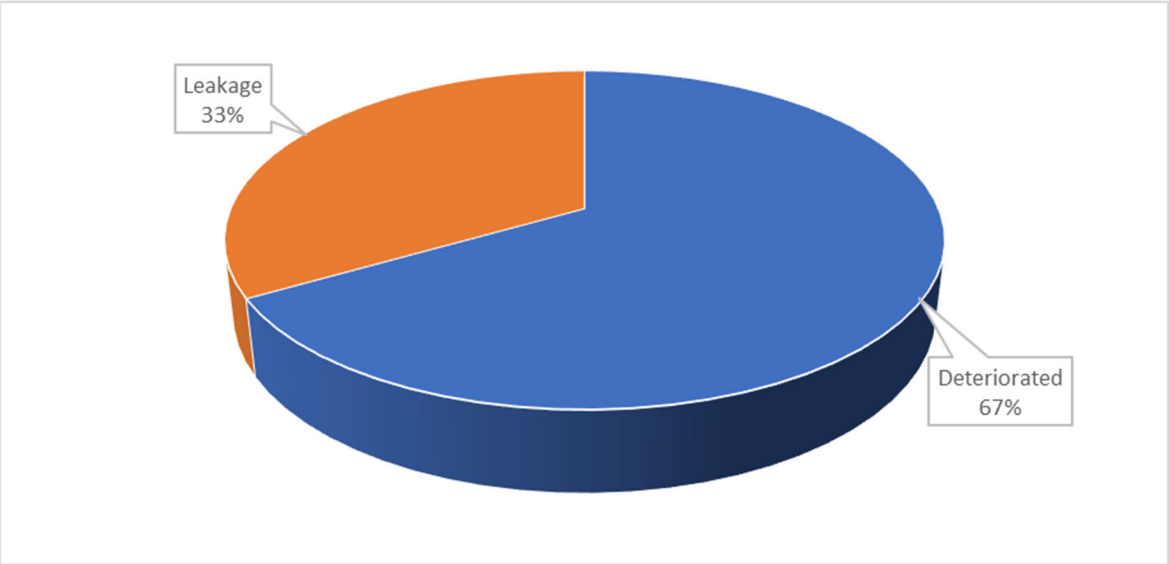

Chart 9-1: Type of damage of Agricultural Product

[9-2] Location of damage occurred

Occurred location	Ratio
Devanning Operation	33.33%
In Transit	66.67%
Total	100.00%

Table 9-2: Location of damage occurred of Agricultural Product

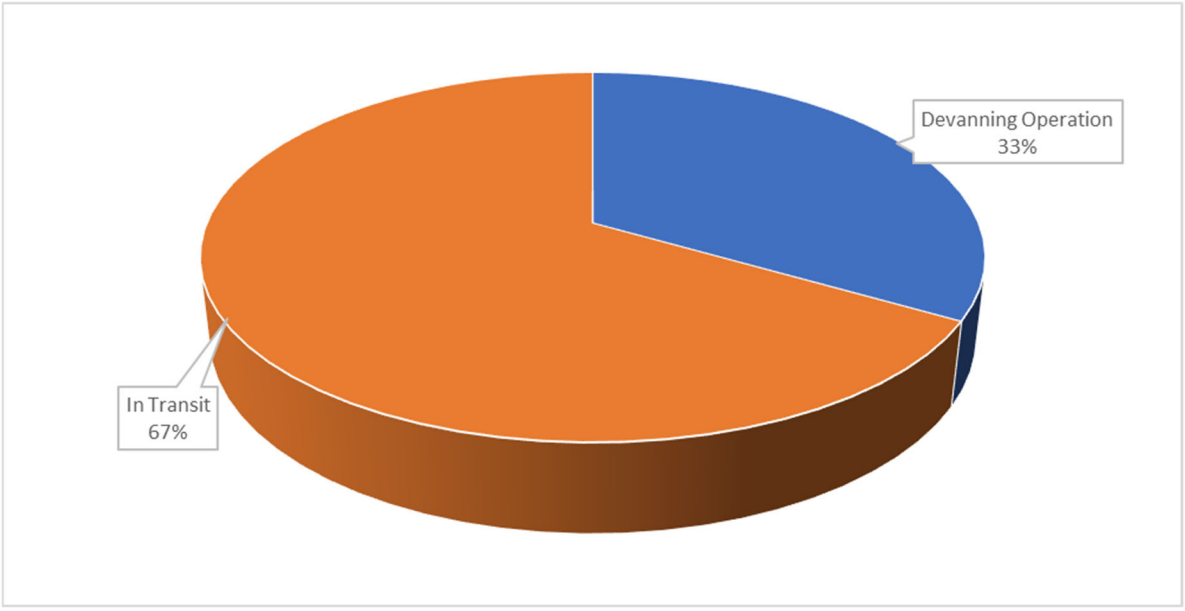

Chart 9-2: Location of damage occurred of Agricultural Product

[9-3] Cause of damage

Cause of damage	Ratio
Humidity change/Temperature change gap	33.33%
Improper Storage	33.33%
Rough handling	33.33%
Total	100.00%

Table 9-3: Cause of damage of Agricultural Product

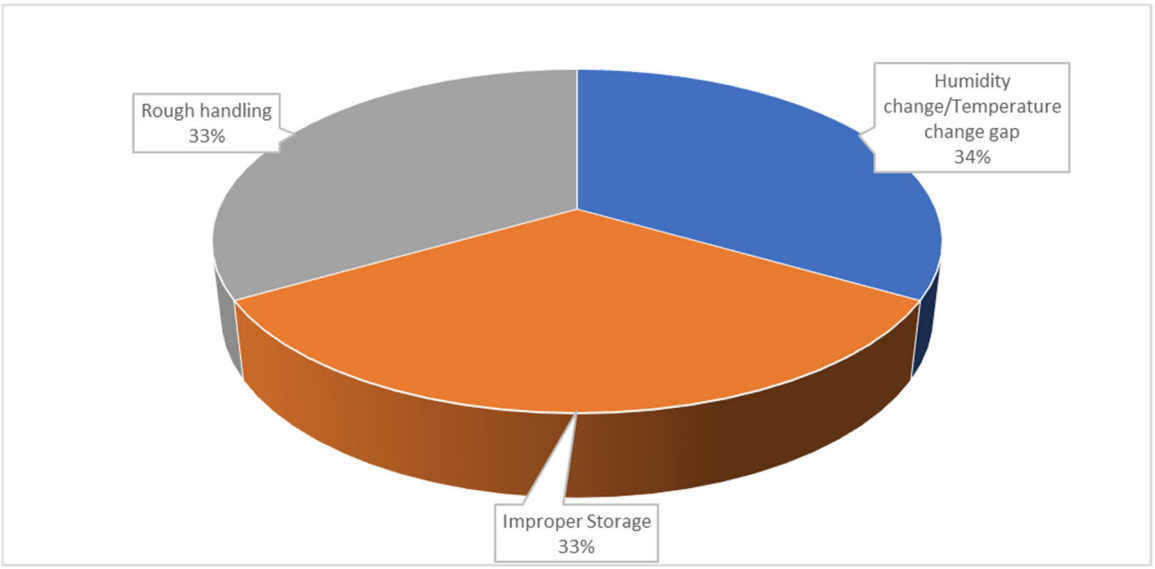

Chart 9-4: Cause of damage of Agricultural Product

10. Fabric Material

[10-1] Type of damage

Type of Damage	Ratio
Operation Failure/Malfunction	14.29%
Stained	71.43%
Wet by Fresh Water	14.29%
Total	100.00%

Table 10-1: Type of damage of Fabric Material

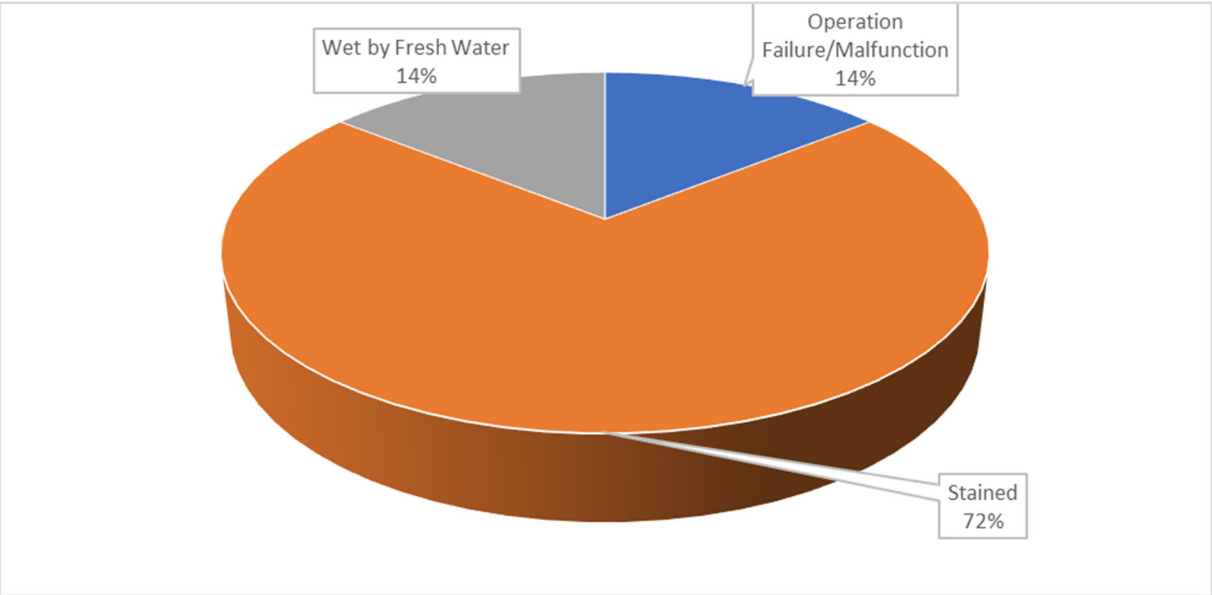

Chart 10-1: Type of damage of Fabric Material

[10-2] Location of damage occurred

Occurred location	Ratio
Devanning Operation	28.57%
In Transit	57.14%
Storage at Discharging Port	14.29%
Total	100.00%

Table 10-2: Location of damage occurred of Fabric Material

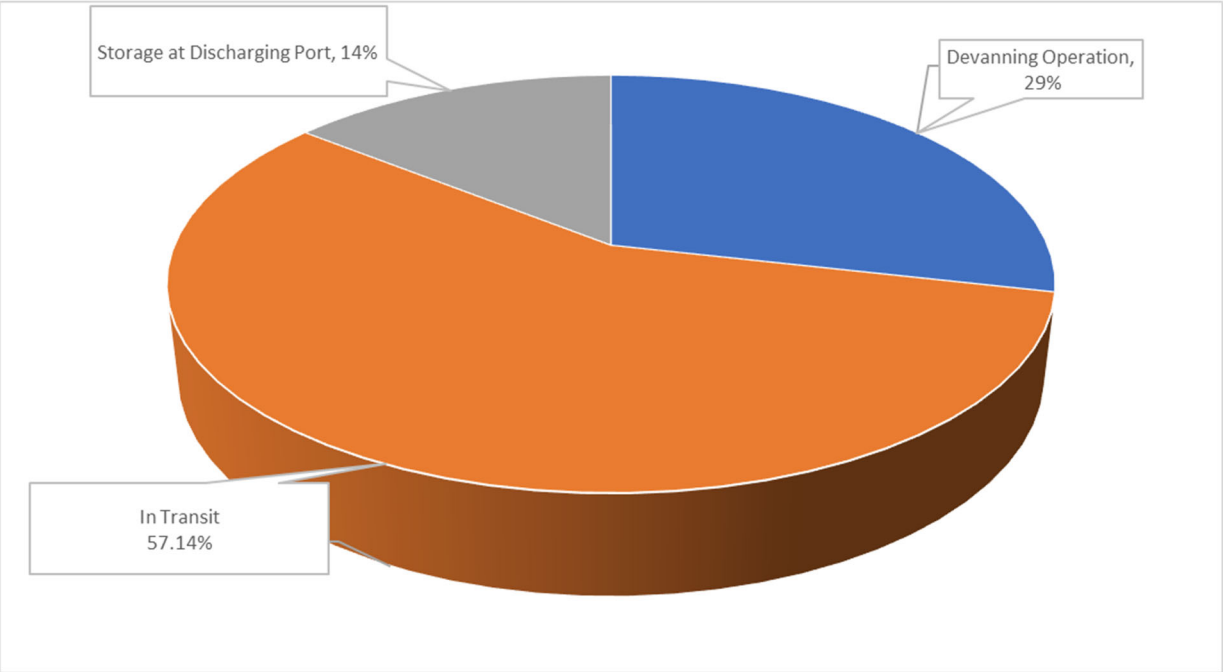

Chart 10-2: Location of damage occurred of Fabric Material

[10-3] Cause of damage

Cause of damage	Ratio
Container sustained damage/malfunction	14.29%
Improper Storage	14.29%
Improper Stowage/Loading	14.29%
Rough handling	57.14%
Total	100.00%

Table 10-3: Cause of damage of Fabric Material

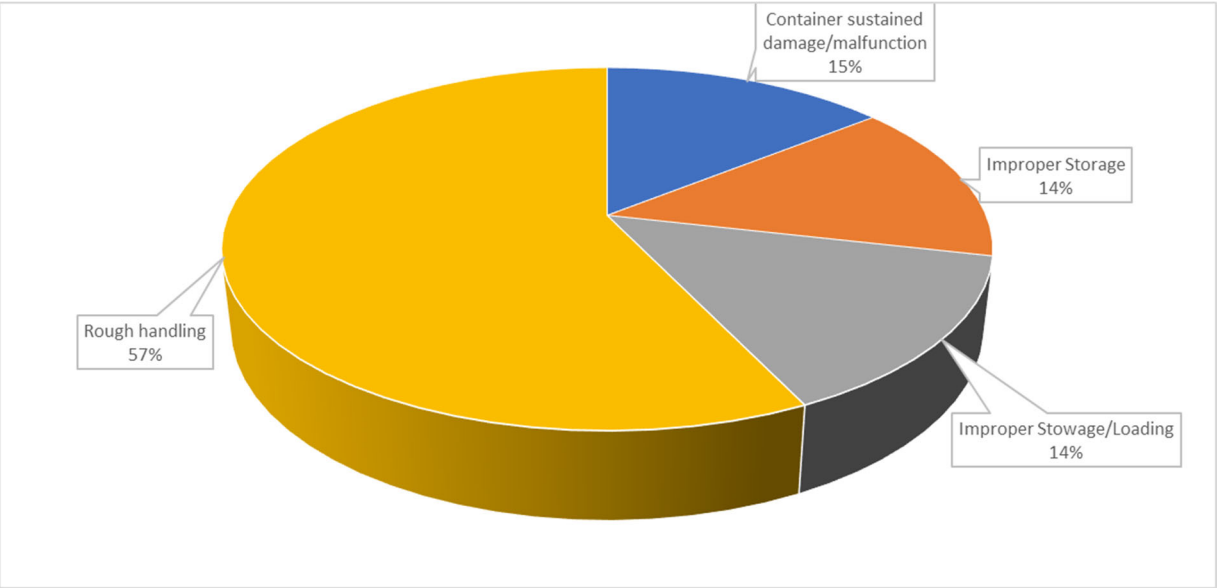

Chart 10-3: Cause of damage of Fabric Material

11. Plastic Product

[11-1] Type of damage

Type of Damage	Ratio
Torn	66.67%
Wet by Fresh Water	33.33%
Total	100.00%

Table 11-1: Type of damage of Plastic product

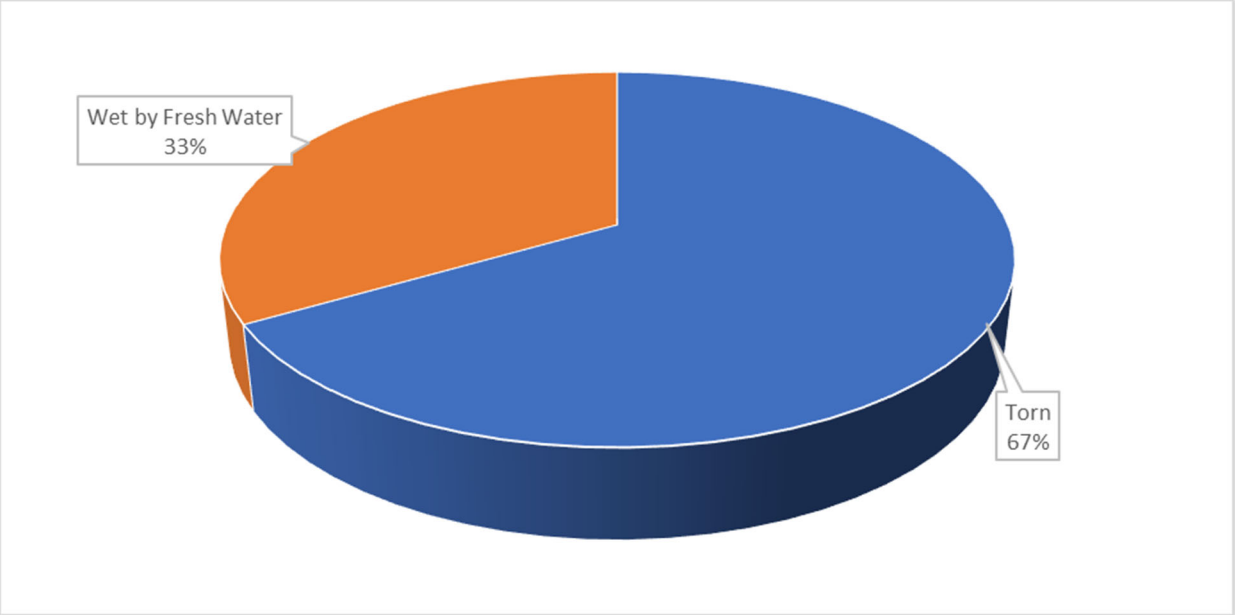

Chart 11-1: Type of damage of Plastic product

[11-2] Location of damage occurred

Occurred location	Ratio
Devanning Operation	33.33%
In Transit	33.33%
Storage at Loading Port	33.33%
Total	100.00%

Table 11-2: Location of damage occurred of Plastic product

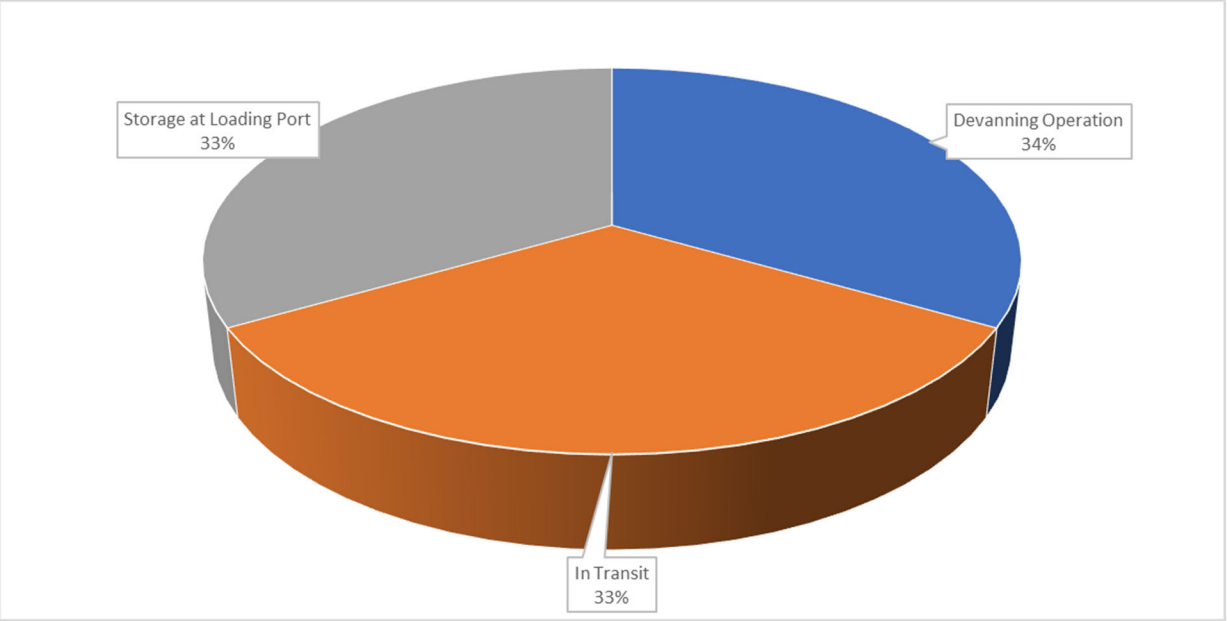

Chart 11-2: Location of damage occurred of Plastic product

[11-3] Cause of damage

Cause of damage	Ratio
Rough handling	66.67%
Vessel/Container Submerge	33.33%
Total	100.00%

Table 11-3: Cause of damage of Plastic product

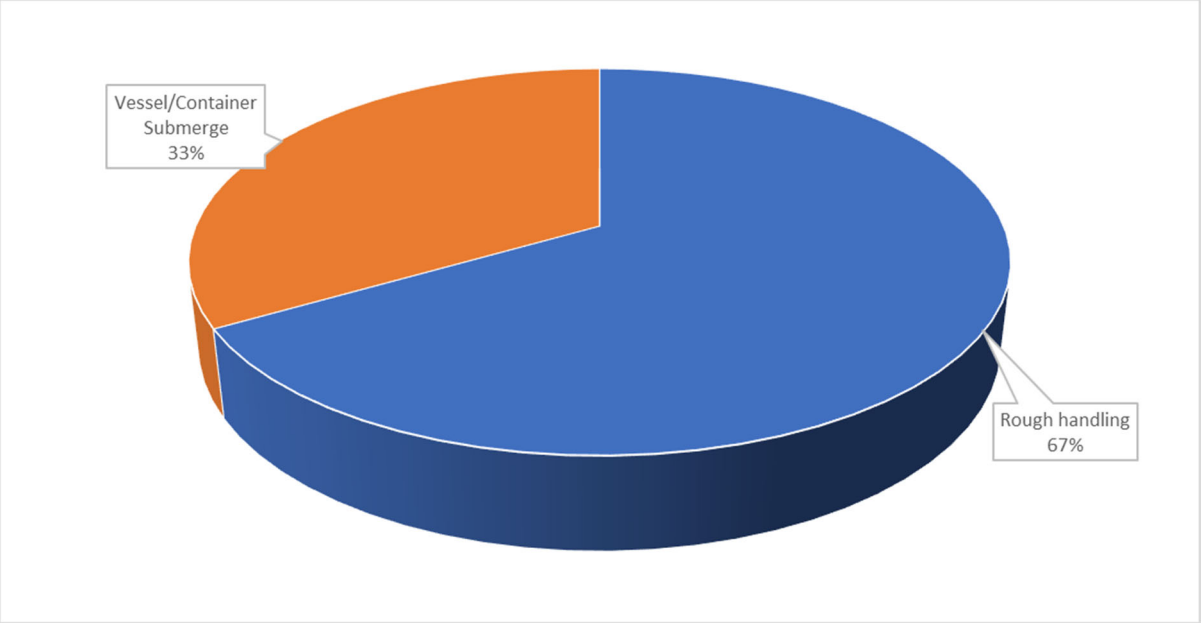

Chart 11-3: Cause of damage of Plastic product