The Impact of Conflict and War on the Transport and Logistics Sector, and “its Economic, Social and Humanitarian Ramifications”

Status Quo.. Impact ..Way Forward

The transport sector with its various branches; road, sea and air is considered the main artery connecting the different cities, urban and rural areas, as well as population settlements. At the local level, it connects markets, productions sites, and export ports to the locomotive of economy and development in terms of production, consumption and trading. At the regional and international level, it links the country to the rest of the world, including foreign financial markets, shopping, trade movement, investment flows, supply chains movement and ideas, all while roaming the world’s stations and its various parts using conventional and modern means of transportation and communication. The technological and informational revolution has helped bring distances closer, reduce costs, shorten time and eliminate barriers and geography, turning the world into one market in which all the obstacles to virtual transmission and access difficulties have been dissolved.

Logistics in transport are among the key issues adversely affecting the economy’s development and overshadowing the people’s education, health, livelihood and – more significantly – mobility. Logistical services in transport are also among the most important factors supporting and affecting economic activities, production movement, accessibility and obtaining the various materials, goods and services.

This issue of the YSEU Bulletin uncovers the transport profile in Yemen and highlights this topic through analysis, evaluation, forward-looking and review of the most prominent recent developments and ramifications that Yemen has witnessed, especially the repercussions sustained by the transport sector and the logistical services it provides as a consequence of the war and conflict vis-a-vis across the economic, social and humanitarian spheres.

I. An Overview of Logistics in the Air, Sea and Road Transport Sector

II. The Impact and Repercussions of Conflict and War on Air and Maritime Logistics

III. The Impact and Repercussions of Conflict and War on Logistics in the Road Transport Sector

IV. Policies and Suggestions to Improve Logistics Performance in the Transport Sector

Facts and Indicators

Transport Related Indicators

140 *
Yemen’s ranking in the Transport Logistical Services Performance indicators for 2018 (out of 169 countries listed), compared to 63 in 2012

88.9% *
the aircraft movement decrease (From 33,812 aircrafts in 2014 to 3,770 in 2020)

165.2% *
the cumulative inflation rate in transport fares went up by end of 2020, i.e. over 4 times increase compared to 2015

Humanitarian Situation Related Indicators

50% *
the ratio of transportation cost to the price of 1 kg of wheat, including freight, insurance and demurrage

20.7 Million People **
in need of some form of humanitarian and protection assistance

5 Million people **
on the verge of famine

50,000 People **
already experiencing famine-like conditions

2.25 Million Children (below 5 years) **
projected to suffer from acute malnutrition in 2021

More than 1 Million Women (pregnant and lactating) **

*Source: All facts and indicators included in this issue are referred to with their sources.

** OCAH: Humanitarian Update, Yemen, March 2021 (Issue 3).

Logistics: Refers to getting products, services and passengers from one location to another via road, sea or air transportation means.
An Overview of the Logistical Services in the Air, Sea and Road Transport Sector

Air Transport

Yemen’s air transport is relatively small compared with other countries with a similar population size and gross domestic product (GDP). Yemen has 6 international airports, including Sana’a Airport, the largest hub of passenger air travel, as well as Aden Airport, Al Rayyan International Airport, Sayoun International Airport, Taiz Airport and Hodeidah Airport. In addition, there are a number of small multipurpose airports scattered all over the country, including Socotra International Airport, located off the coast of the mainland, in Socotra archipelago in the Arabian Sea. Currently, there are only four airports operating flights.

Table (1): The Status Quo of Aviation in the Yemeni Airports

<table>
<thead>
<tr>
<th>S</th>
<th>Airports</th>
<th>City</th>
<th>Governorate</th>
<th>ICAO*</th>
<th>IATA**</th>
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</tr>
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<tbody>
<tr>
<td>1</td>
<td>Sana’a International Airport</td>
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<td>Open</td>
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<td>3</td>
<td>Al Rayyan International Airport***</td>
<td>Mukalla</td>
<td>Hadhramout Gov.</td>
<td>OYRN</td>
<td>RIY</td>
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<td>Taiz</td>
<td>Taiz Gov.</td>
<td>OYTZ</td>
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<td>Hodeidah Gov.</td>
<td>OYHD</td>
<td>HOD</td>
<td>Closed</td>
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<tr>
<td>6</td>
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<td>Sayoun</td>
<td>Hadhramout Gov.</td>
<td>OYSY</td>
<td>GFX</td>
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Sources:

Though small in size, the aviation industry in Yemen has many important strengths. The sector is in line with international standards, and Yemen Airways is respected for its safety and performance records. The national carrier, Yemen Airways, connects Yemen well with most of its economic partners, while the sector’s infrastructure has been adequately upgraded and is considered suitable for current and future air traffic. Nevertheless, air transport in Yemen is stressed by several major issues, most importantly the following: 1) Lack of clear general strategy for developing air transport is relatively small compared with other countries with a similar population size and gross domestic product (GDP). Yemen has 6 international airports, including Sana’a Airport, the largest hub of passenger air travel, as well as Aden Airport, Al Rayyan International Airport, Sayoun International Airport, Taiz Airport and Hodeidah Airport. In addition, there are a number of small multipurpose airports scattered all over the country, including Socotra International Airport, located off the coast of the mainland, in Socotra archipelago in the Arabian Sea. Currently, there are only four airports operating flights.

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Maritime Transport

There are 6 international seaports in Yemen (Aden Port, Hodeidah Port, Mukalla Port, Mocha Port, As Saleef Port, Nashtoon Port), equipped to receive goods and vessels, and provide cargo, unloading and storage services. There also exists 3 major seaports for the export of oil and liquefied gas (Ras Issa Port, Ash Shihr Port, and Belhaf Port), in addition to 8 local ports.

Table (2): The Status Quo of Maritime Transport in the Yemeni Ports

<table>
<thead>
<tr>
<th>S</th>
<th>Port</th>
<th>Governorate</th>
<th>Purpose</th>
<th>Operating Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aden Ports</td>
<td>Aden</td>
<td>Commercial and Oil Terminal</td>
<td>Open</td>
</tr>
<tr>
<td>2</td>
<td>Hodeidah Port</td>
<td>Hodeidah</td>
<td>Commercial and Oil Terminal</td>
<td>Open</td>
</tr>
<tr>
<td>3</td>
<td>As Saleef Port</td>
<td>Hodeidah</td>
<td>Commercial and Oil Terminal</td>
<td>Open</td>
</tr>
<tr>
<td>4</td>
<td>Mocha Port</td>
<td>Taiz</td>
<td>Commercial and Oil Terminal</td>
<td>Closed</td>
</tr>
<tr>
<td>5</td>
<td>Mukalla Port</td>
<td>Hadhramout</td>
<td>Commercial and Oil Terminal</td>
<td>Open</td>
</tr>
<tr>
<td>6</td>
<td>Ash Shihr</td>
<td>Hadhramout</td>
<td>Oil Terminal</td>
<td>Open</td>
</tr>
<tr>
<td>7</td>
<td>Belhaf Port</td>
<td>Shabwa</td>
<td>Oil Terminal</td>
<td>Closed</td>
</tr>
<tr>
<td>8</td>
<td>Ras Issa Port</td>
<td>Hodeidah</td>
<td>Oil Terminal</td>
<td>Closed</td>
</tr>
<tr>
<td>9</td>
<td>Nashtoon Port</td>
<td>Mahara</td>
<td>Oil Terminal</td>
<td>Open</td>
</tr>
</tbody>
</table>

Sources:
- World Bank Group, Yemen Policy Note No. (3), Readiness of the Private Sector to Contribute to Reconstruction and Recovery in Yemen, May 23, 2017. p. 11
- Yemen - port situation, Updated 13 January 2021, https://www.gard.no/web/content/yemen-port-situation

Maritime transport is of great importance to trade in Yemen. Yemen imports nearly 90% of fuel, medicines and basic foodstuffs including wheat, rice and sugar. Available data on the current status of ports in Yemen, as of January 12, 2021, show the following:

- Operating ports: Aden, Mukalla, Ash Shihr - for oil exportation - Nashtoon, As Saleef, and Hodeidah.
- Closed ports: Mocha and Ras Issa Marine Terminal, Ras Issa Petroleum Products Discharge Facility and Belhaf LNG Terminal.

Be that as it may, it should be noted that the current capacity of the operating ports may be limited amid deficiency in fuel supplies and other basic services, and the possibility of declining shipments as a result of the damage and destruction sustained by several Yemeni ports, as well as ship delays due to the crippling conditions brought about by the current conflict and war conditions.

**Road transport**

Nationally, the total road network in Yemen reached about 58,200 square kilometers, of which nearly 17,330 square kilometers were paved roads by the end of 2020, i.e. about 29.8% of the total road network in Yemen, while total unpaved roads accounted for 40,870 square kilometers. This indicates that the unpaved road network constitutes about 70.2% of the entirety of the national road network, which poses a burdensome challenge for future development in the country.

A case study on gender and transport by the WB has shown that improving road transport logistics is a crucial step for improving mobility for all, especially women and children, since poor quality road transport logistics puts transportation costs and commodity prices on the rise, while significantly limiting women and children’s access to social services such as education, health, movement and water, evermore so in rural areas of Yemen, where access to basic services is heavily hindered by poor road infrastructure and scant service providers. For example, when women are forced to move out of their villages, they become incredibly concerned how to access health services, including maternity/childhood services.

**Logistics Performance Indicators in Transport**

The Logistics Performance Indicator created by the World Bank is considered the most important interactive benchmarking tool to help countries identify their capacity to integrate with trade and global markets. It evaluates the performance of logistical services in more than 167 countries bi-annually starting 2007, the Index launch year. The LPI serves also as a tool used by countries to identify the challenges and opportunities they face in their performance in trade logistics, and what they can do to better perform logistical services (customs clearance, infrastructure, tracking

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4 Yemen - Port situation, Updated 13 January 2021. [https://www.gard.no/web/content/yemen-port-situation](https://www.gard.no/web/content/yemen-port-situation)

and tracing, timeliness, international shipments, efficiency and quality logistics). It measures the performance of logistics to identify weaknesses in the logistics chains, and provide advice to address them. Measuring performance is useful in evaluating the conduciveness of the business environment in countries and what potential they have in international trade.

Data in Table (3) shows a significant deterioration in Yemen’s ranking in 2014 (151) compared (63) in 2012. Data for 2016 are not available due to the war conditions.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2007</th>
<th>2010</th>
<th>2012</th>
<th>2014</th>
<th>2016</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yemen’s Ranking</td>
<td>112</td>
<td>101</td>
<td>63</td>
<td>151</td>
<td>140</td>
<td>140</td>
</tr>
<tr>
<td>Customs</td>
<td>105</td>
<td>69</td>
<td>110</td>
<td>159</td>
<td>-</td>
<td>104</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>111</td>
<td>88</td>
<td>74</td>
<td>153</td>
<td>-</td>
<td>131</td>
</tr>
<tr>
<td>International shipments</td>
<td>123</td>
<td>142</td>
<td>38</td>
<td>134</td>
<td>-</td>
<td>141</td>
</tr>
<tr>
<td>Logistics</td>
<td>111</td>
<td>110</td>
<td>69</td>
<td>141</td>
<td>-</td>
<td>131</td>
</tr>
<tr>
<td>Tracking &amp; Tracing</td>
<td>104</td>
<td>94</td>
<td>51</td>
<td>144</td>
<td>-</td>
<td>146</td>
</tr>
<tr>
<td>Timeliness</td>
<td>108</td>
<td>68</td>
<td>70</td>
<td>124</td>
<td>-</td>
<td>151</td>
</tr>
</tbody>
</table>

Findings of the 2018 report showed that Yemen ranked 140 out of 169 countries listed, which indicates the mammoth wages of the war and the exceptional circumstances that Yemen is going through, affected Yemen’s ranking across the various components of LPI. The report shows that Yemen’s rank has been declining in most components of the Index. For example, Yemen ranked 141 in the international shipments index for 2018 compared to 38 in the 2012, i.e. the largest decline ever recorded across the various components of the index. This indicates that international shipments are incredibly and poorly performing in terms of shipments arrangement at competitive prices. In addition, the country recorded a significant plunge in the tracking and tracing index, as it fell to 146 in the 2018 report compared to 51 in the 2012 report, i.e. 95 ranks less. As for the timeliness index, Yemen ranked 151 in the 2018 report, a low ranking compared to what it was in 2012 report (rank: 70), i.e. a decrease of 81 points, including the timing of shipments arriving at destination ports within the given or expected delivery time. In the meantime, the conditions of conflict and war have also played a part and affected Yemen’s performance under the LPI, as the country’s ranking dropped by about 62 ranks in the 2018 report compared to the 2012 report, an indication of poor efficiency and quality of logistics services (including transport operators and customs brokers).
II The Impact and Ramifications of Conflict and War on Logistics in the Air and Sea Transport Sector

Logistical Damages in Air and Sea Transport

The air and sea transport sector has sustained severe infrastructural damage, including destruction of some of its components and basic parts. On the one hand, the building of Aden International Airport, the control tower, transport corridors, runway and other support facilities were damaged. Sana’a International Airport has incurred damages to its runways, hangars, and aircrafts. It is still reportedly functional only for UN chartered flights. On the other hand, Hodeidah and Taiz Airports have also suffered extensive damage to buildings, support facilities and infrastructure, to the extent that these airports are out of service, or operating at very low capacity. No exact estimates as to the cost of damage caused so far, which entails accurate damage assessment and identification of the reconstruction needs.

Furthermore, the ports of Aden, including facilities of Aden Refinery in Buriaka, the container wharf and the tourist pier incurred severe damage. Also, the storage facilities and support buildings at Mua’alla port and the Free Zone in Aden suffered damage. However, Aden ports resumed providing services a few months ago, after the fighting in Aden city ceased. For its part, the port of Hodeidah suffered extensive damage to the cranes and other basic facilities necessary to operate the port, which bring down the port’s operating capacity by about 40%. This is also applicable to Mocha port, whose key infrastructure facilities destroyed, and had ultimately to shut. Overall, the infrastructure of the air and sea transport sector needs to be rehabilitated and facilities to be reconstructed to leverage its operational capacity.

Impact on logistics in air and sea transport

Regarding cross-sectoral impacts, the air and sea transport is intimately linked to several sectors, including air traffic, humanitarian operations, food security and trade, with their concomitant logistical costs.

Impact on Air Transport and Humanitarian Operations

The impact on the air transport sector to operate normally is severe and pretty evident given the wide-scale damage to its infrastructure, as we mentioned above. All these airports are either not prepared, stopped working, or operating at a very low capacity, especially since the end of March 2015, when all regional and international airlines suspended flights to Yemen. Only the national carrier "Yemeni Airways" kept operating a number of scheduled flights from Aden and Sayyun airports to Amman and Cairo.

Table (4) The impact of the War on Air Traffic in Yemen

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2020</th>
<th>Change since 2014 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft movement</td>
<td>33,812</td>
<td>3,770</td>
<td>-88.9</td>
</tr>
<tr>
<td>Arrival passenger traffic</td>
<td>1,335,471</td>
<td>135,117</td>
<td>-89.9</td>
</tr>
<tr>
<td>Departing passenger traffic</td>
<td>1,334,698</td>
<td>133,605</td>
<td>-90.0</td>
</tr>
<tr>
<td>Freight traffic/Incoming (tons)</td>
<td>12,316</td>
<td>1,850</td>
<td>-85.0</td>
</tr>
<tr>
<td>Freight traffic/Outgoing (tons)</td>
<td>6,075</td>
<td>28.5</td>
<td>-99.5</td>
</tr>
</tbody>
</table>

Source:
- https://www.mot.gov.ye/wp-content/uploads/2021/04/%D8%A7%D9%84%D8%A8%DA%91%DA%A7-%D8%AF%D9%85-%D8%AA%D9%88-%D8%A7-%D9%86%202020-2014.pdf
- https://www.mot.gov.ye/wp-content/uploads/2021/04/%D8%A3%D9%88-%D8%A7-%D9%86-%D8%A7-%D8%AA-%D9%85-%D9%86-%D8%AF-%D8%AA-%D8%AD-%D8%A7-%D9%88-%D8%A7-%D9%86-%D8%A7-%D9%84-%D8%A7-%D9%88-%D8%A8-%D9%88-%D8%A7-%D9%84-%D8%A7-%D9%86-%D8%AF-%D8%AA-2020.pdf

Sana’a International Airport used to accommodate up to 80% of domestic and international travelers before shifting air traffic to Aden and Sayyun airports. Subsequently, shifting air traffic to Aden and Sayyun has doubled the suffering of travelers from some governorates, especially the sick and the elderly, and affected the movement of humanitarian supplies. Hence, the reopening of Sana’a Airport and other airports under permanent arrangements, whether the Stockholm Agreement or any new agreements sponsored by the United Nations, would positively push up the movement of travelers in general, and the ingress of food and humanitarian supplies in particular, while allowing the egress of those seeking medical attention or education abroad.

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10 UNDP, Damage and Capacity Assessment for Ports of Hodeidah, Salif and Ras Issa, Apr 12, 2020.
More specifically, the re-opening of Sana’a International Airport will alleviate the current suffering by Yemeni people with chronic diseases and those with renal failure, especially in light of a near-collapsed health system, which is now functioning at minimum capacity. Some statistics indicate that there are 450,000 patients who urgently need to travel for treatment abroad, about 30 of them dies every day. In addition, there are some 8,000 patients with renal failure who need urgent kidney transplants, which is only available overseas14.

**Impact on Humanitarian Operations**

The humanitarian action in Yemen faces a host of logistical challenges that impede the delivery of aid materials into and in-country including: 1) Limited storage capacity at some key locations, including limited temperature-controlled storage capacity, 2) Administrative red tape and 3) Limited international shipping options by sea and air.15

Data indicate that Sana’a airport is still open to flights operated by the United Nations. Updates for March 2021, suggest that the main route designated for transporting goods by air is that from Dubai to Sana’a and Aden, as needed. This service can only be activated for emergency and urgent cases, provided to pass through multiple stages of permission requests submitted by partners. Air transport to Yemen is also confined to life-saving emergency materials and goods based as prioritized by the Humanitarian Country Team (HCT), in order to ensure common resources available are optimally utilized.16 This creates mammoth difficulties to the operational environment of 208 national and international humanitarian organizations nationwide since the beginning of 2019, in order to respond to the most urgent needs. Combined, these organizations provided some forms of humanitarian assistance to more than 18.5 thousand passengers who were airlifted by the United Nations Humanitarian Air Transport Services (UNHAS). In the meantime, The Logistics Supply Cluster has supported humanitarian actors in coordinating, managing information and facilitating access to logistics hubs, free of charge to service users: transporting goods from Djibouti to Sana’a by air.17

**The Impact on the Movement of Commercial Goods and Entry of Food and Fuel Shipments**

Administrative and logistical procedures and arrangements have increased due to the unfavorable general conditions that the country is passing through amid institutional divisions, especially the transport sector, as ships coming to Yemeni ports take longer than the normal time to enter the berths and to upload and discharge.

In the port of Hodeidah, the process of loading, transporting and discharging takes longer, since ships carrying commercial and humanitarian goods are generally required to apply for permits upon departure from the port of origin, due in part to the procedures required by the United Nations Verification and Inspection Mechanism (UNVIM). There are other problems and procedures, some of which result from the non-implementation of the Stockholm Agreement in this regard.

All humanitarian shipments heading to Yemeni ports and all ships coming to the ports of Aden and Mukalla shall apply for entry permit through the Ministry of Transport, prior to arrival.

The conflict is placing enormous pressure on the technical and institutional capacities of Yemeni ports at a time when they are badly required to meet the growing demand for humanitarian relief operations and food supplies.18


**1) Monthly report issued in March 2021 has come up with the following findings19:**

- **Food and Fuel Discharged as of March 2021**
  - In March 2021, there was an increase of 45% in food discharged compared to the 2020 average and 41% increase compared to the monthly average since May 2016, or 446,925 tons compared to 308,746 and 301,885 tons, respectively.
  - A 73% (38,309 t) decrease in fuel discharged in March 2021 compared to the 2020 average (142,221 t) and a 78% (180,339 t) decrease compared to the monthly average since May 2016.

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14 Suffering to Death Due to Closure of Sana’a International Airport (Accessed: May 3, 2021). https://www.aljazeera.net/news/humanrights/2020/11/15/%D9%85%D8%B9%D8%A7%D9%86%D8%A9-%D8%AD%D8%AF-%D8%A7%D9%84%D9%86-%D8%A8%D8%AA-%D9%84%D8%A7%D8%A8-%D8%B1%20-%D8%A7%D8%AF
17 World Bank Group, Transport Sector in Yemen, Yemen Policy Note 4.
The United Nations estimates Yemen’s fuel needs at about 544,000 tons per month, based on pre-conflict levels\(^\text{20}\). Figure (2) shows that the average monthly fuel discharged was about 131,628 tons/month during the period 2016-March 2021, which contributed to meeting about 25% of the need, on average. This leaves 75% of monthly needs unmet. A need of 412,372 tons is not satisfied on a monthly basis, ultimately igniting dire fuel crises regularly.

2) **Food and Fuel Vessel Delays as of March 2021**

- In March 2021, food vessels spent an average of 4.7 days at anchorage and 7.9 days at berth, compared to an average of 8.7 days at anchorage and 4.6 days at berth in March 2020.
- In March 2021, the average time spent by fuel vessels was 68.3 days, as opposed to an average of 17.4 days in 2019, showing a 118% increase in waiting time.

In the port of Aden, data indicate that 10,000 metric tons/day of general cargo is being handled at Mua’alla terminal. Although congestion and delays are reported, yet the overall situation has seen progressively improving since late 2018\(^\text{21}\).

### The Impact on The Costs of Trade, Logistics and Food Delivery

The trade of buying and selling goods and merchandise in Yemen has become overwhelmingly expensive, as shipments now take three to four months instead of one month as it formerly used to, consequently increasing the cost of sea freight for local importers. The rise in import costs is ascribed to a number of reasons: the significant delays in handling and unloading cargo shipments at local ports, the introduction of the United Nations Verification and Inspection Mechanism, procedures imposed on shipments going to some Yemeni ports, and the high costs of insurance premiums for shipments. Insurance rates for shipments to Yemen also rose more sharply. According to interviews with (insurance) sector actors, ship charters often comprise of specific provisions related to the outbreak of conflict. These agreements now contain special provisions known as war risk clauses. In the context of Yemen, these terms imply additional insurance premiums of $500 per shipment equivalent of a 20-foot container capacity and $1,000 per shipment equivalent of a 40-foot container capacity. However, this additional cost has not been yet renegotiated for shipments heading to the port of Aden. This is in spite of the fact that Aden has been declared a safe area and is no longer within the scope of the United Nations Verification and Inspection Mechanism. Air freight costs have also soared. Not to mention that insurance companies charge 200% insurance fees on Yemen Airways, which is to presumably drop significantly after peace is restored and the risk of direct damage to shipments fades away\(^\text{22}\).

### Impact on food supply chain costs

Table (5) shows that the three major drivers of cost include: 1) The soaring wheat price globally (69% since April 2017), international freight and insurance costs (50% increase since April 2017), and newly introduced costs against

demurrage (by up to 100% of the final price). Meanwhile, heightening warfare competition over ports and ad hoc duplication if regional and Un inspection procedures pushed onshore shipping costs up significantly and contributed to the inflation of stable food retail prices, pushing the local consumer prices up. Overall, the final price paid to international suppliers of wheat flour rose by about 42% compared market price in April 2017.

<table>
<thead>
<tr>
<th>Description</th>
<th>WORLD BANK APRIL 2017</th>
<th>ACAPS DECEMBER 2019</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per ton of wheat grain paid to the exporter</td>
<td>73</td>
<td>123</td>
<td>69%</td>
</tr>
<tr>
<td>International shipping and insurance cost</td>
<td>14</td>
<td>21</td>
<td>50%</td>
</tr>
<tr>
<td>The value of one-day delay fines in Aden</td>
<td>0</td>
<td>27</td>
<td>100%</td>
</tr>
<tr>
<td>Cost of importer silo mills</td>
<td>0</td>
<td>7</td>
<td>100%</td>
</tr>
<tr>
<td>In-country transportation cost</td>
<td>8</td>
<td>10</td>
<td>21%</td>
</tr>
<tr>
<td>Average cost to importer</td>
<td>95</td>
<td>188</td>
<td>98%</td>
</tr>
<tr>
<td>Importer margin</td>
<td>22</td>
<td>21</td>
<td>-3%</td>
</tr>
<tr>
<td>Grinding cost</td>
<td>21</td>
<td>16</td>
<td>-24%</td>
</tr>
<tr>
<td>Imported selling price</td>
<td>138</td>
<td>225</td>
<td>63%</td>
</tr>
<tr>
<td>Agent/wholesaler margin</td>
<td>2</td>
<td>7</td>
<td>249%</td>
</tr>
<tr>
<td>Agent/wholesaler selling price</td>
<td>140</td>
<td>232</td>
<td>66%</td>
</tr>
<tr>
<td>Retailer margin</td>
<td>35</td>
<td>16</td>
<td>-54%</td>
</tr>
<tr>
<td>Wheat flour retail price</td>
<td>175</td>
<td>248</td>
<td>42%</td>
</tr>
</tbody>
</table>


Latest information dated April 26, 2021, up to 50% of the cost per 1 kilogram of wheat is driven by transportation costs such as shipping costs, insurance and delay charges. Meanwhile, the current inspection system doubles the transportation cost of each container as they are being unloaded prior to inspection, and the cargo is moved to another vessel before they reach Yemen. In addition, shipping companies bear 16 times extra war risk insurance than in any other locations23.

The Impact on Trade Movement

Figure (3) shows that the conflict and war caused oil exports to complete halt, with the cumulative decline in exported goods and services by about 81.3% in 2020 compared to 2014. Oil and gas exports suffered a sharp decline by 81.4% and 69.7%, respectively, in 2020 compared to 2014. The closure of the land borders with Saudi Arabia - due to military confrontations - affected primarily the local farm produce and fisheries catch, recording a significant cumulative decline in exports at about (80.3%) for fisheries, (88.2%) for vegetables and fruits, (81.1%) for honey, and (88.5%) for coffee, respectively. On a larger scale, this also affected local production in general due to the unavailability of raw materials needed for agricultural production, such as fertilizers, pesticides, vaccines, improved seeds and machinery24.

There exist many other factors that contributed to this decline such as obtaining appropriate documentation and permits, funds for equipment such as boats and nets, and restrictions imposed on the number of operable vessels.

Data in Figure (4) shows that imports of goods and services have declined by a cumulative rate of about 50.5% in 2020 compared to 2014.

![Figure (4): The Impact of Conflict and War on Key Commercial Imports: Cumulative Change in 2020 Compared to 2014 (%)](image)


To this end, key commercial imports such as wheat, rice, sugar, medicine and oil declined by about 35.7%, 59.2%, 50.1%, 76.8% and 58.1%, respectively. This means undersupply of basic commodities and needs, which the country is in dire need of. This decline in the ingress of goods has affected the livelihoods of all Yemenis, both in urban and rural areas, who rely heavily on imports to help produce food, as well as retail trade meeting their basic needs, such as fuel.

In country goods and merchandise movement in Yemen is done through a number of seaports, container berths, oil docks, and land border crossings. Historically, the bulk of trade is routed through the ports of Aden, Hodeidah, As Saleef, Mukalla, and Haradh-Al-Tewal crossing, on the border between Yemen and Saudi Arabia.

Since the beginning of the war, the regular activities by the main ports in Yemen have been widely disrupted with operations ceased due to the conflict, while others had to close temporarily or permanently, equipment and facilities sustained extensive damage, leading to prolonged delays in loading and discharging of shipments. Power outages for long periods, understaffing, as well as security and safety-related threats do also play a part. All these factors have reduced the operational capacity of key port facilities – and the same is true for Yemeni airports – on the commercial sectors relies to a large extent on its imports.

Considering that the ports of Aden and Mukalla are still operating, there are some other key ports such as Hodeidah Port, As Saleef, Mukalla, and Haradh-Al-Tewal crossing, on the border with the Kingdom of Saudi Arabia, although they are main entry points, and they generate over 50% of the revenues collected by Yemeni customs during the pre-war period.

### Implications on the Economy and Humanitarian Needs by Specific Groups (women and children)

The declining oil, gas, agricultural and fishery exports - used to be a major source of GDP – caused the national economy to shrink. In 2020, the real GDP recorded cumulative contraction of about 50.5% compared to 2014. This means that more people, including children, would be pushed below the poverty line, while humanitarian crisis will exacerbate, pushing living standards further down. As a result of the economic downturn, the average per capita GNP dropped from $1,191 in 2014 to $867 in 2020 (at the official exchange rate of 250 YER/1 US$), and from $1,191 in 2014 to $362 in 2020 (at the parallel exchange rate of 600 YER/1 US$). As per capita income lost an astounding 69.6% of its value in dollar terms in 2020 compared to 2014, this means that women will be exposed to greater economic pressures, and they have to strive to support their families, because they often have limited or no experience regarding income-generating activities. Therefore, rehabilitative and developmental skills around income-generating activities.

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targeting women and girls remains an urgent need that must be addressed. Data indicate that an estimated 40% of households have lost their main source of income. (Women were more severely affected than men.)

**Growing humanitarian needs 2021**

As drivers impeding logistics services in air and sea transport and their ramifications continue unabated, the especially those ramifications on supplies and aid delivered by humanitarian organizations – became more evident with regard to the increasing humanitarian needs and higher risks of famine, severe acute malnutrition and the spread of diseases, especially among children, women, persons with disabilities, the elderly and vulnerable groups. With nearly 90% of food imported through the country's poorly maintained and war-damaged ports, this causes long delays and rising costs. Moreover, the rising cost of food, fuel and medicine, and the difficulty accessing them by ordinary citizens, increase their suffering even further.

This cannot be attributed to inadequate food stock, but to the deteriorated logistics services in the air and sea transport, due to rising cost of imported products, and inevitably higher market prices, making the food available in the markets out of reach for the average Yemeni citizens.

Based on the 2021 Humanitarian Needs Overview document analysis, it is estimated that 20.7 million people, or 66% of the total population, are in need of such humanitarian assistance, while some 12.1 million people are in dire need. These people face crisis or suffer severe acute need to be able to secure their necessities of life, and maintain their health and safety, as they adopted coping strategies for mere survival.

**Figure (5): Deterioration of the Air and Sea Transport and Its Impacts on Humanitarian Needs: Needy People by Population Group and Gender (2021)**

- Integrated Phase Classification, Yemen Food Security and Nutrition Excerpt 13 April 2021.

Food insecurity and malnutrition are also among other major drivers behind the rising number of people in need. It is estimated that 16.2 million people will suffer hunger in 2021 (IPC Phase 3 or beyond), including 5 million people facing emergency conditions (IPC phase 4), while 47,000 people are already in catastrophic conditions (IPC phase 5). Meanwhile, more than 2.8 million children aged 0-59 months, and about 1.7 million pregnant and lactating women (PLWs) will suffer acute malnutrition during 2021. In addition, over 15.4 million people need support to access basic water and sanitation services, including 8.7 million people in dire need. Yemenis, and women are no exception, are increasingly forced to resort to negative coping mechanisms with regard to WASH services and related practices, which significantly increase the risks of malnutrition and increase the prevalence of WASH-related diseases and epidemics, including Cholera and dengue fever.

Improving the performance of logistics in air and sea transport and resuming commercial imports including fuel, while facilitating rapid and unfettered passage of humanitarian assistance - is crucial to prevent further deterioration in and acceleration of needs. On the other hand, directing aid by donors and the international community towards infrastructure investment, including maintenance and rehabilitation ports, can indeed make a significant contribution to the famine response in Yemen. This would also reduce the cost of food coming into the country, thus making food more affordable for Yemenis.

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30 Integrated Phase Classification, Yemen Food Security and Nutrition Excerpt 13 April 2021.
The basic infrastructure of the logistical road transport sector sustained extensive damage and destruction as a result of the conflict and war, creating more obstacles and restrictions on the movement of passengers, domestic and foreign trade. Yemen Dynamic Needs Assessment (DNA): Phase 3 suggests that immediately upon the end of the conflict in Yemen, attention should be given to maintain and rehabilitate at least 5,000–6,000 km of high-priority roads.

The Impact on Road Transport Logistics

The conflict and the war degraded logistical services for road and land transport. The domestic trade road network and movement of travelers witnessed a shift due largely to the closure of some roads and the wide-scale damage they incurred, while roadblocks and closures have forced civilians to use alternative routes. Table (6) shows the Condition of Road Network and Alternative Routes

<table>
<thead>
<tr>
<th>Road</th>
<th>Condition</th>
<th>Alternative Routes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sana’a - Marib Highway</td>
<td>The road is surrounded with mines and is completely out of service.</td>
<td>Sana’a-Al-Jawf-Ma’rib Highway (via Arhab or Harf Sufyan), which is also used as a road leading to the Al-Wadeea’a border crossing, and then back via Marib-Al-Baydha’a (via Harib, Shabwa, Al-Baydha’a, Rada’a, Dhamar and Sana’a), where the total travel time increased by more than four times.</td>
</tr>
<tr>
<td>All roads used connecting Sana’a with the eastern governorates through Ma’rib (Mahra, Hadhramout and Shabwa)</td>
<td>Closed due to the ground battles in Nihm and closure of the Sana’a-Marib road</td>
<td>The Marib-Al-Baydha’a Sana’a road (through Harib, Shabwa, Al-Baydha’a, Rada’a, Dhamar and Sana’a) or (Aden-Taiz-Sana’a road, which is a very long detour)</td>
</tr>
<tr>
<td>Hodeidah-Sana’a Highway</td>
<td>Closed due to the damage sustained due to the conflict. It is not suitable for heavy duty trucks</td>
<td>Hodeidah-A’anes (Dhamar)-Sana’a road, which is used as an alternative detour road from Sana’a to Hodeidah via Manakhah. However, this alternative route is long and not safe and is known for the presence of dangerous bandits.</td>
</tr>
<tr>
<td>Aden-Taiz highway (via Karish, AR Rahida)</td>
<td>Bridges and roadways were damaged by the conflict, including Attan Bridge in the way between Taiz- Lahj- Aden. Despite temporary backfills during 2015, large trucks still unable to drive through. Small trucks to transport goods to the other side of the damaged bridge are being used instead since the beginning of 2016. This road was completely closed due to the constant battles and mines planted on the sides.</td>
<td>The Aden-Hayjat Al-A’abd-Hayfan-Taiz road, or the part leading to Al-Turbah and then back to Taiz via Al-Hawban has been used as an alternative route connecting Aden with the rest of the governorates, but has recently become a battlefield and is closed most of the time.</td>
</tr>
<tr>
<td>Aden-Taiz-Sana’a</td>
<td>Closed</td>
<td>Via Hayjat Al-A’abd (Heyfan)</td>
</tr>
<tr>
<td>Aden - Al Dhalea’- Sana’a</td>
<td>Al-Dhalea-Qa’ataba-Al-Fakhir-Ibb-Sana’a road &amp; Al-Dhalea-Damt-Ibb-Sana’a roads are the shortest routes connecting Aden and Sana’a.</td>
<td>Aden-Lahij-Al-Baydha’a road, but it is not suited for heavy duty vehicles.</td>
</tr>
<tr>
<td>Haradh-Hodeidah-Sana’a</td>
<td>Closed</td>
<td>Via Hajja</td>
</tr>
<tr>
<td>Sana’a - Sa’ada</td>
<td>The road from Khamir to Sana’a is closed</td>
<td>Al-Malahidh road is being used as alternative to the Khamir - Sa’ada route, and has become impossible inaccessible due to the war in the area. It can be accessed via Sa’ada – Amran road</td>
</tr>
<tr>
<td>All the roads to Taiz, especially the one leading to Taiz city</td>
<td>Access to Taiz is extremely difficult and dangerous, and often impossible, especially for goods.</td>
<td></td>
</tr>
</tbody>
</table>

Source:
Damage to key road corridors such as Aden–Sana’a, Hodeida–Sana’a, and Safir–Marib–Al Baydha’–Dhamar has forced extremely costly and excessively lengthy detours. The journey between major ports to Sana’a and large population centers now takes more than five days, as compared to one or two days before the conflict. As a result, the transport cost of key commodities such as wheat, flour, and steel has roughly tripled between 2015 and 2019, thereby increasing the end price of transported products.\(^{32}\)

The cumulative inflation rate in transport costs increased by 165.2\% at the end of 2020, i.e. more than four times increase, compared to 2015. This has directly and concurrently triggered a rise on food prices, with cumulative inflation rate rose by 162.3\% in 2020, i.e. 8 times increase as compared to 2015.

These reverberations makes travel more agonizing, particularly for women and children, who make up for 74\% of the population), together with challenges triggered by poor logistics in road transport and its relationship to malnutrition risks, as Yemen recorded one of the highest levels of acute malnutrition with devastating losses among children under five. Also, more than 2.25 million children aged 0-59 months and more than 1 million pregnant and lactating women are expected to suffer acute malnutrition during 2021. Moreover, more than 15.4 million people require support to meet their basic water and sanitation needs, including 8.7 million people in dire need.\(^{33}\)

Logistical difficulties in road transport disproportionately and severely undermine the delivery of humanitarian aid and relief, which impeded the ability of humanitarian actors to deliver aid supplies, causing significant delays. A report by the Logistics Cluster in Yemen highlighted a host of ramifications, mainly the following: 1) Land transportation of relief items encounter growing risks, and sometimes impossible, when roads are not physically accessible. The road transport infrastructure is often inadequate or damaged, 2) shortage in fuel supplies and volatile fuel costs, and 3) Difficult transportation of goods by road was considered due to lengthy procedures to obtain permits from Sana’a and Aden. Physical access to beneficiaries is also another hurdle.

On March 3, 2021, the Logistics Cluster also indicated further complications facing in-country road transport, with humanitarian supplies have been facing mounting restrictions since late 2020. In addition, such gaps and constraints are on the rise, including fuel crisis in Yemen, which has reached a critical stage. During the period January and February, the Bilateral Cooperation Unit received 2021 applications for a total of about 150,000 liters of fuel, 35\% of which were processed.\(^{35}\)


\(^{34}\) LOGISTICS CLUSTER, YEMEN, LESSONS LEARNED REPORT, April 2017

\(^{35}\) Logistic Cluster Yemen Coordination Meeting Minutes, March 3, 2021
https://logcluster.org/sites/default/files/logistics_cluster_yemen_meeting_minutes_210303_arabic.pdf
IV Policies and Suggestions to Improve Logistics Performance in the Transport Sector

**Urgent Priority Policies**

- Bringing sustainable peace to Yemen and facilitating the ingress of goods, while lifting all the restrictions imposed on the transport sector, as part of a comprehensive and sustainable peace agreement ending the war conditions in the country and accelerating economic activity, including the movement and exchange of goods and fuel that are much needed, and thus contribute to reducing prices. Other humanitarian and commercial imports to address the basic needs of people shall also be allowed into the country.
- Reduce demurrage time, including commercial cargo ships, fuel and food, and repair/revamp port infrastructure, and thus significantly contribute to alleviating the humanitarian crisis.
- Introduce measures designed to ease transportation and logistics costs associated with imports in general and food supply, in particular, including the facilitation of a more stabilized and transparent access to fuel.
- Reduce insurance premiums against war risks leveled from food importers, by coordinating with donor countries to reduce insurance costs charged by private insurance companies, through DDs from the guarantor’s bank account.
- Speed up the procedures to obtain import security clearances and inspection structures in order to shorten delay and associated costs.
- Encourage donors to support and finance investment in port maintenance and rehabilitation, which would significantly contribute to the famine response in Yemen. The cost of food entering the country can be reduced through these investments, thus making food more affordable for Yemenis.
- Foster coordination channels between the Ministry of Planning and International Cooperation and the relevant authorities on one hand and international and humanitarian organizations on the other, to streamline logistics in road transport, and thus contribute to the ingress of humanitarian aid.
- Neutralize logistics in road transport to facilitate the movement of passengers, goods and humanitarian assistance.
- Initiate a rapid reassessment of losses and damages to logistics in road transport.

**Policies in the medium and long term**

- Expand logistics promotion projects in road transport and rural roads to contribute to rural development, taking into account best interests of women and children.
- Develop a holistic plan to develop the port of Aden as a free zone and international hub given its strategic location at key international straits and crossings.
- Revamp the infrastructure of key airports connecting Yemen to the outside world and international markets, especially Sana’a Airport.
- Devise a comprehensive strategic plan to improve and raise efficiency of logistics performance in air and maritime transport.
- Invest more and more in training and capacity building, as this would enable Yemeni ports to receive more vessels easily – and thus reducing costs and ultimately increasing access to essential commodities by all Yemenis. Having done that, then the peacebuilding process can be prioritized to ensure a brighter future for Yemen.
- Embark on an integrated reconstruction program for Yemen in general, and transport sector in particular to improve the sector’s logistics.
List of main sources and references

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