

Since March 2019, there have been five significant disruptions at Al Hodeidah port, which have reduced fuel imports into Al Hodeidah by an average of 70%.

In June 2020, the Internationally Recognized Government of Yemen (IRG) suspended fuel imports through Al Hodeidah port. Barring a brief three-month hiatus between October and December 2020, IRG has since permitted only limited and occasional commercial fuel imports via Al Hodeidah.

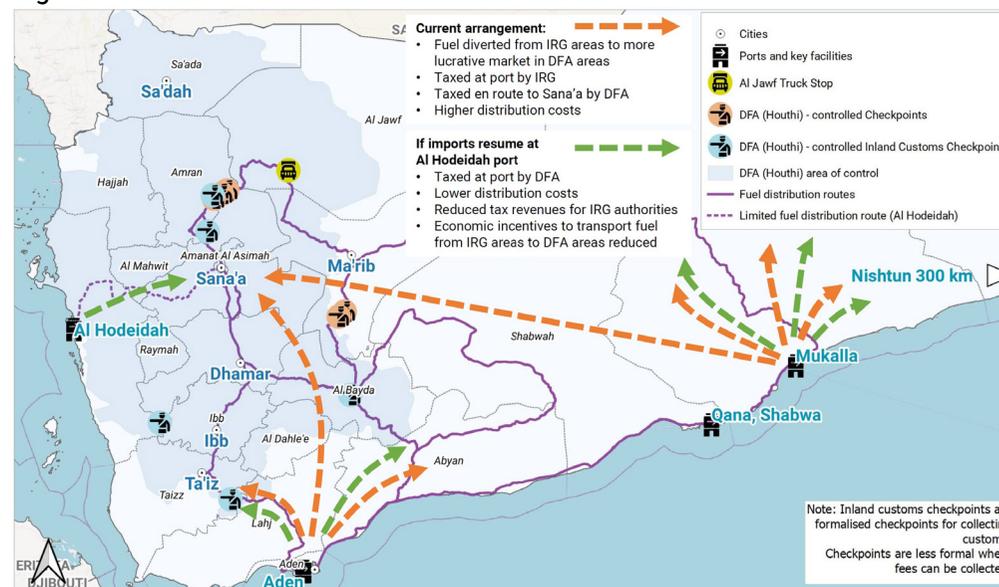
In April 2022, the DFA and the Saudi-led coalition agreed a two-month nationwide truce (Reuters 01/04/2022). The deal includes allowing fuel ships to enter Al Hodeidah port and offers a key opportunity for the reduction of commercial fuel prices in DFA controlled areas.

The reduction of direct commercial fuel imports via Al Hodeidah has not led to a fuel supply shortage in areas under the control of the de-facto authority (DFA) in the north of Yemen (also known as the Houthis), even though the port provided almost half of monthly fuel import volumes to the country. Shortages of fuel are often caused by managed rationing in DFA areas rather than reduced availability. In-country supply chains have been able to quickly adjust with fuel being trucked overland from non-DFA areas in order to access the more lucrative market in DFA areas. The strategy that IRG adopted and market response have resulted in recurring disruption to local fuel supplies in IRG areas.

The IRG continues to benefit financially from the additional fuel import taxes and customs applied to the increased volumes of fuel entering via seaports located in non-DFA areas, namely Aden and Mukalla. Meanwhile, the DFA generates revenue through customs fees that would normally be applied at Al Hodeidah but are now being applied against fuel trucks that enter DFA areas overland, in addition to revenue generated from domestic fuel sales.

The current Ukraine crisis has significantly impacted international oil prices. The fuel price modelling within this report does take into account the international oil price, however numbers may vary depending on price fluctuations. Regardless of fluctuations in the international oil price, fuel disruptions at Hodeidah port has a significant impact on DFA commercial market fuel prices.

Figure 1. Shifts in main overland fuel distribution routes.



Source: ACAPS discussions with operational partners. See full map on page 17.

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## SITUATIONAL OVERVIEW

### In DFA areas

- Based on December 2021 fuel prices, if the disruption at Al Hodeidah port is removed, DFA commercial market fuel prices could decrease by 18% (from YER 590/L to YER 483/L).
- Despite adequate fuel supply, the DFA limited the availability of fuel sold at the 'official price' for the end consumer, which is sold at DFA-run Yemen Petroleum Company (YPC) stations and agents of YPC. Fuel is mainly sold at a higher 'commercial rate' at privately owned stations, which receives most of the supply.
- The DFA has continued to generate revenues from fuel imports trucked overland. These revenues are meant to pay outstanding public sector employee salaries but are unlikely to be used for that purpose.
- DFA fuel rationing and increased prices negatively impact Yemeni households, humanitarian organisations, and the private sector. Consequences include: added financial pressure on households and their respective budgets, especially those with already limited purchasing power; reduced resources and capacity for humanitarian organisations to implement their programmes; and additional costs and disruptions on the production capacity of businesses and market supply.
- Higher fuel prices and transportation costs limit people's mobility to work and urgent needs and inhibit the provision of services at affordable prices.
- Fuel rationing and increased fuel prices are likely to reduce the rate of delivery for food, medicine, and trucked water (among other goods), leading to supply disruption and shortages as well as reduced access to affordable clean drinking water. Local operational actors have reported an increase of over 30% in the prices of trucked water and electricity since January 2021 when IRG reinstated its policy of reduced commercial fuel imports through Al Hodeidah<sup>1</sup>.
- High fuel prices increase the cost of irrigated food crops and contribute to decreased a reduction in local agricultural production. Moreover, higher fuel prices increase the cost of transporting locally produced foods between governorates, which in turn leads to increased fruit and vegetable prices.

### In IRG areas

- The exchange rate and international oil prices largely influence consumer fuel prices.
- There is no correlation between Al Hodeidah import reductions and IRG parallel market fuel prices.
- Fuel prices rise and fall in accordance with the value of the Yemeni rial in IRG areas against the US dollar. Given the managed stability of the DFA rial exchange rate, the further the

depreciation of the IRG rial exchange rate, the larger the gap between the currencies. As a result, business becomes more lucrative to supply fuel to DFA areas instead of IRG areas, causing market disruptions.

- Higher fuel prices and recurring disruption to local fuel supplies in IRG areas reduce mobility and service delivery and limit access. This negatively impacts people and their livelihoods, as well as negatively impacting local food production, fisheries, and humanitarian operations.

### All of Yemen

- Significant fuel price hikes over the past few years have negatively impacted consumers in both DFA and IRG areas. Fuel will potentially become increasingly unaffordable for households, businesses, and humanitarian organisations.

## EXECUTIVE SUMMARY

The primary objective of this report is to determine the impact that the easing of disruption to commercial fuel imports via Al Hodeidah since January 2021 would have on fuel prices in DFA and IRG areas.

Figure 1 shows the impacts of the fuel import disruption in Al Hodeidah.

The disruption to commercial fuel imports via Al Hodeidah port does not appear to have had a significant impact on DFA revenues or profits, owing to the recouping of otherwise potentially lost revenue through taxation and domestic fuel sales in DFA areas. Between August 2017 and August 2021, fuel imports into Al Hodeidah decreased by around 70%, which has had a significant impact on DFA monthly fees, taxes, distribution costs, and commercial profit margins attached to commercial fuel that enters directly via Al Hodeidah port. The loss of direct revenue from Al Hodeidah Port has been mostly covered by revenue generated from fuel trucked from IRG to DFA areas. In the same period, overland transport costs increased DFA monthly fees, taxes, distribution costs, and commercial profit margins. Increased consumer prices covered the rise in international oil prices and the cost of moving fuel overland from non-DFA to DFA areas.

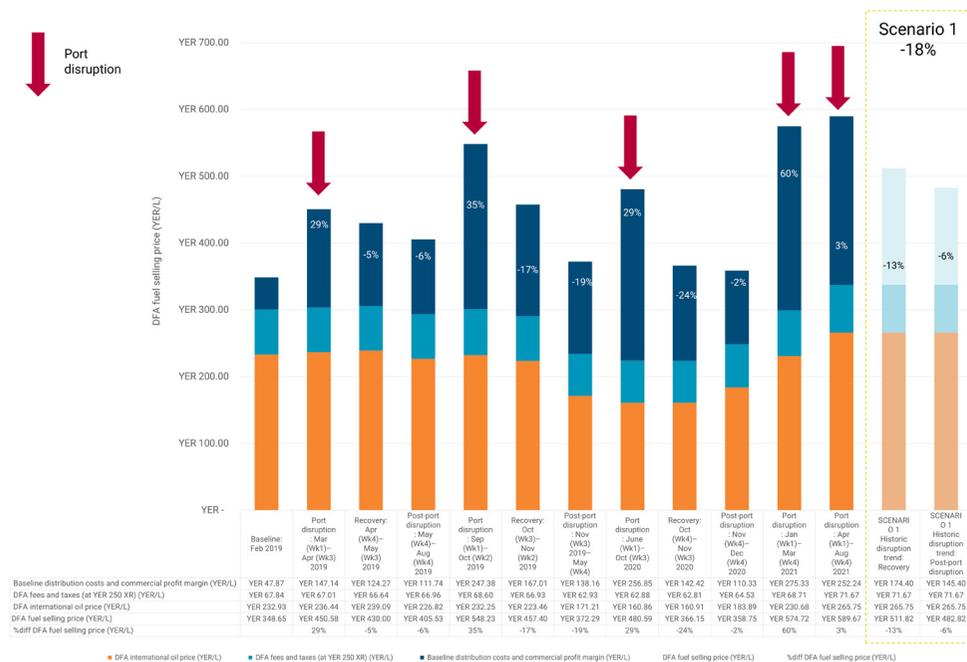
The modelling estimates that an easing of the disruption to Al Hodeidah fuel imports could result in an 18% overall price reduction – from YER 590/L (YER 11,800/20L) to YER 483/L (YER 9,660/20L) – in the commercial fuel sale at privately owned stations. Note that on 11 June 2021, the DFA-run Yemen Petroleum Company (YPC) announced an increase of 'official' petrol and diesel prices from YER 5,900 to YER 8,500 for 20 litres of petrol and from YER 5,900 to YER 7,900 for 20 litres of diesel (with average diesel and petrol prices at YER 8,200/20L)

<sup>1</sup> ACAPS discussions with operational actors

(Sana'a Center 14/07/2021). As of 9 February 2022, the official fuel prices had increased to YER 9,900 for 20 litres (YPC 10/02/2022) whilst commercial fuel prices increased to YER 16,000 for 20 litres in March 2022 (YPC 13/03/2022), whilst commercial fuel prices increased to YER 16,000 for 20 litres as of 13 March 2022. This is in part a result of continued local disruption of fuel supply and the impact of the ongoing crisis in Ukraine.

If Al Hodeidah port restrictions were lifted, the lower consumer price of fuel could decrease the DFA total fuel cost distribution costs would decrease, while official DFA import taxes and customs would increase.

Figure 2. Average DFA fuel selling price per period.



See full graph on page 9.

There is also no correlation between a reduction in Al Hodeidah imports and the parallel market or commercial rate of fuel sold at privately owned fuel stations in IRG areas. Consumer prices in IRG areas are largely influenced by the exchange rate and international oil prices. Removing the disruption at Al Hodeidah port will unlikely have a significant impact on fuel prices but will affect IRG revenues, as fewer import tax revenues and customs would be collected from fuel entering via Aden and Mukalla ports.

In March 2022, the DFA-run YPC released details on the fuel price breakdown for fuel that enters via Aden and is then trucked to Sana'a. Whilst this report does not disaggregate commercial fuel prices into such detail, this analysis continues to be an iterative process and ACAPS continues to monitor and analyse such fuel price dynamics. There are opportunities to build upon this report to better understand the breakdown of baseline distribution costs and commercial profit margins. Similar analysis will also be possible for fuel that is trucked to Sana'a from Mukalla and Nishtun ports.

For the purposes of this report, the primary focus is on Al Hodeidah port and the link between the volume of commercial fuel imports through Al Hodeidah and domestic fuel prices in DFA and IRG areas. The report does, however, acknowledge the IRG strategy of mitigating the impact of reduced commercial fuel imports via Al Hodeidah through other seaports, namely Aden and Mukalla. ACAPS notes the importance of Nishtun Port within the broader picture of total fuel imports to Yemen, with a percentage of fuel imported via Nishtun being trucked overland to areas under DFA control. Between the beginning of March 2021 and the end of February 2022 fuel imports averaged 405,000 metric tons (MT) per month. During this period, Nishtun recorded a monthly fuel import average of 21,041 metric tons (MT), compared to 258,759 MT for Aden, 82,568 MT for Mukalla, and 42,633 MT for Al Hodeidah (ACAPS discussions with operational partners, 04/04/2022).

## METHODOLOGY

Previous disruption periods at Al Hodeidah port and local fuel supplies in DFA areas were identified to create this model. This step was followed by identifying a spike in fuel prices and an easing of disruption and lowering of fuel prices in DFA areas.

The periods identified occurred at different points from March 2019 to December 2021. February 2019 is referenced as a baseline to contrast pricing in DFA areas during the cyclical periods of disruption.

The periods identified from March 2019 onwards were selected using a combination of WFP price data (beginning March 2019 to August 2021) and the detailed understanding of researchers about the context surrounding the onset and easing of periods of disruption. The selection of periods for data analysis accounted for:

- the delayed impact of the initial trigger(s) that, on the one hand, disrupted the entry of fuel via Al Hodeidah and the supply of fuel in DFA areas and, on the other, caused the subsequent price hike witnessed in DFA areas
- the delayed impact of, on the one hand, the easing of disruption and reduced restrictions against fuel entering via Al Hodeidah and the supply of fuel in DFA areas and, on the other, the subsequent lowering of fuel prices in DFA areas.

### Port disruption periods

For previous flashpoints when disruption occurred, the analysis compared prices for three different stages:

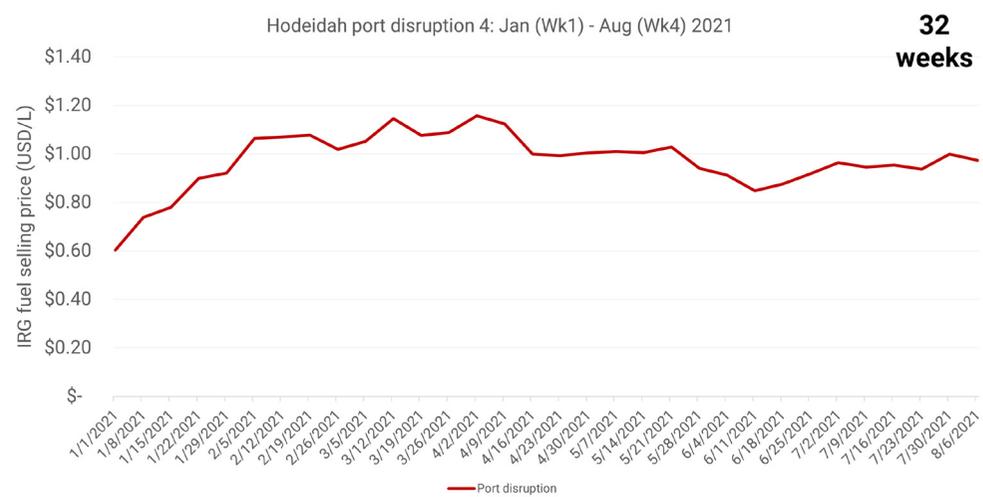
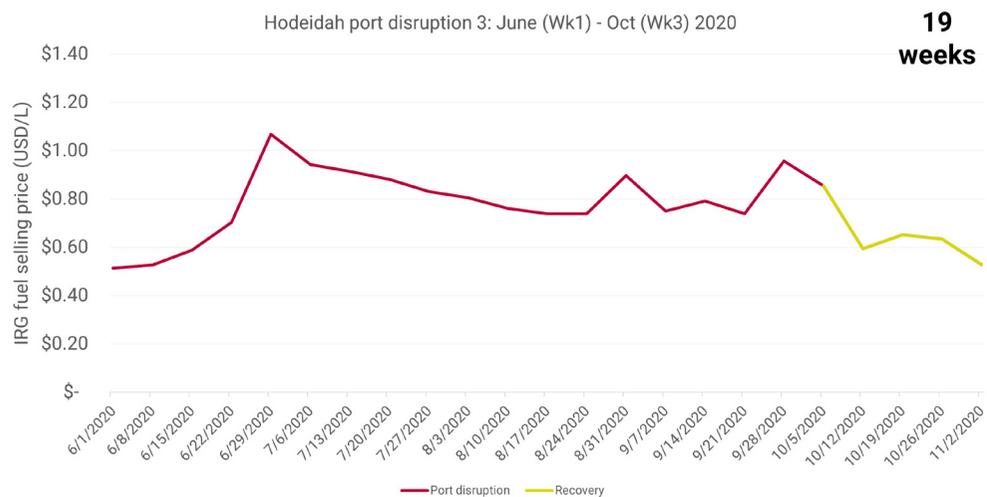
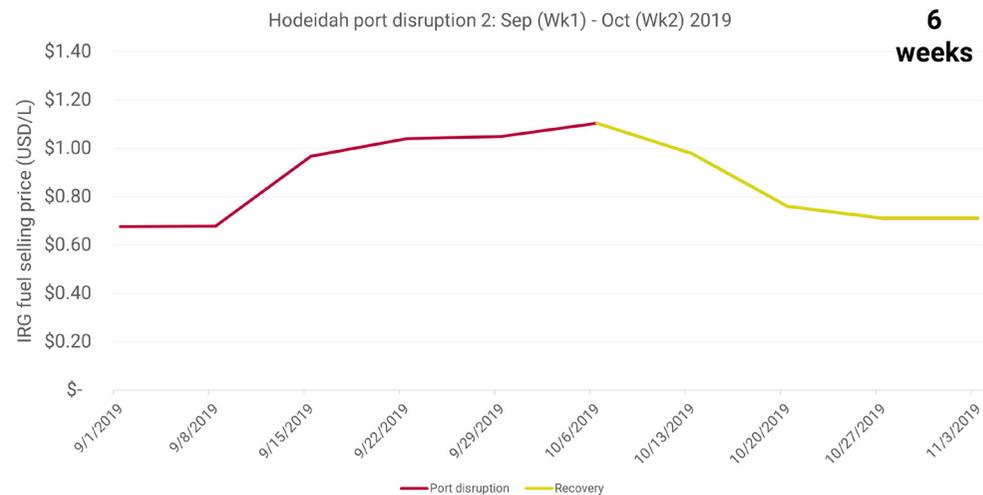
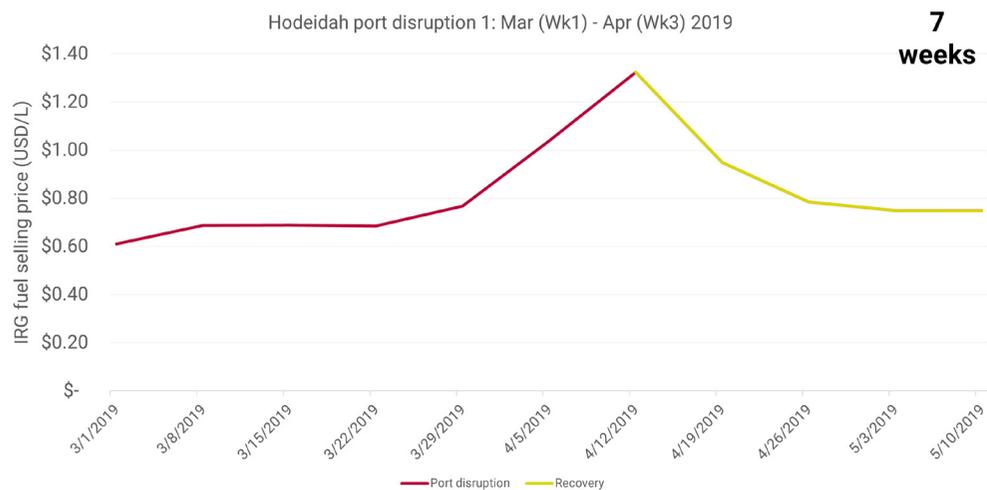
- **An identified port disruption period** covering the period when fuel imports via Al Hodeidah and the supply of fuel in DFA areas were disrupted. This period also accounted for the market impact whereby prices continued to rise despite the initial cause of disruption easing.
- **An identified recovery period** of four weeks from when fuel prices in DFA areas started to decrease in all DFA governorates after having peaked.
- **An identified post-port disruption period** covering fuel prices from after the initial four-week recovery period until the next major period of port disruption.

The periods identified and subsequently cross-examined were as follows:

- **February 2019:** the baseline period predating the cyclical disruption of fuel imports via Al Hodeidah port and the disruption of fuel supplies to DFA areas.
- **March (week 1) to April (week 3) 2019:** the disruption of fuel imports via Al Hodeidah caused by a build-up of fuel vessels in the Coalition Holding Area as the DFA responded to IRG Decree 75. This period did not see a reduction in fuel import quantities but saw an increase in fuel prices as a result of the disruption.
- **September (week 1) to October (week 2) 2019:** the disruption of fuel imports via Al Hodeidah as the DFA prohibited the entry of fuel vessels and shipments to Al Hodeidah port in opposition to IRG Decree 49, which was announced in July 2019.
- **June (week 1) to October (week 3) 2020:** the IRG suspended all fuel import activity through Al Hodeidah in June 2020. IRG then issued reduced clearances for the entry of fuel via Al Hodeidah from July–September 2020 while authorising increased imports via Aden and Mukalla ports, which are not under DFA control.
- **January (week 1) to August (week 4) 2021 (ongoing):** the IRG resumed their strategy of limiting fuel imports via Al Hodeidah and authorising increased fuel imports via Aden and Mukalla ports.

Figure 3 below highlights fuel prices during the defined disruption period.

Figure 3. Fuel prices during disruption periods.



## POST-PORT DISRUPTION FUEL PRICE MODELLING ANALYSIS

### Modelling methodology

Based on the periods outlined above, the following fuel price modelling has been developed:

- **Al Hodeidah imports (MT)** – the monthly average of imports, including percentage differences, into Al Hodeidah port for each period
- **DFA/IRG fuel selling price (YER/L)** – the average YER selling price of fuel per period
- **DFA/IRG fuel selling price (USD/L)** – the average equivalent USD selling price of fuel per period using the corresponding exchange rates in DFA and IRG areas.

Four variables have been applied to the analysis, as outlined in Table 1.

Table 1. Post-port disruption fuel price modelling variables.

VARIABLE	METHODOLOGY
Al Hodeidah fuel imports	Values taken from data collected through discussions with operational actors. Values were converted to litres for analysis (Metric Conversions accessed 22/12/2021).
International oil price	Values taken from the US Energy Information Administration website (EIA accessed 02/02/2022).
Exchange rate (YER to USD)	The exchange rate extracted from the Yemen Economic Tracking Initiative (YETI) (ACAPS accessed 22/12/2021).
Fuel selling price (YER/L)	Values taken from WFP fuel price data and YETI. Data is recorded at the parallel market price rather than the official price.
Disruption, recovery, and post-disruption periods	Periods outlined in the methodology above and defined in the Annex I timeline.

From these variables, it is possible to calculate the following:

- fuel import quantities per period
- fuel selling prices per period
- the percentage difference between periods.

Both DFA and non-DFA areas were considered<sup>2</sup>.

The international oil price, which makes up approximately 48% of the selling price of fuel, was included in calculations.

DFA fee and tax estimates were also included in the calculations. For DFA areas, fuel import taxes and customs were calculated as a percentage of the total shipment. Based on discussions with operational actors, taxes and fees were calculated as follows:

- customs = 5% for diesel; 10% for petrol
- fuel import taxes = 11.4%.

Calculations for import taxes and customs were based on the following exchange rates:

- before July 2021: YER 250 per USD 1
- after July 2021: 500 per USD (Reliefweb 01/08/2021)

### Forecasting

A DFA forecast scenario was developed and used to take the average percentage reduction in baseline distribution costs and commercial profit margins following a disruption period.

The modelling calculated an 18% total reduction in the fuel price in rials and a 17% total reduction in the fuel price in US dollars between the current disruption and post-port disruption scenarios.

The modelling reviewed the percentage reduction in baseline distribution costs and commercial profit margins between the port disruption and recovery periods. The percentage difference between the periods was calculated, and an average was taken from each of the three disruption periods. The baseline distribution costs and commercial profit margins were used to calculate the period differences to exclude international oil price fluctuations from the forecasting.

Tables 2 and 3 highlight the consumer price differences and forecasting.

<sup>2</sup> The following governorates were defined as within the DFA area of control: Ad Dali, Al Bayda, Al Hodeidah, Al Mahwit, Amran, Dhamar, Hajjah, Ibb, Sadah, Sana'a, Sana'a city, Taiz (ACAPS accessed 20/12/2021)

Table 2. Historic DFA fuel price reduction during the four-week recovery period (in YER).

PORT DISRUPTION	PORT DISRUPTION FUEL PRICE (YER/L)	RECOVERY FUEL PRICE (YER/L)	% DECREASE
March–April 2019	451	430	4.7%
September–October 2019	548	457	16.6%
June–October 2020	481	366	23.9%
January–August 2021 (forecast)	590	512	13.2%

In the first four-weeks following disruption, an initial 13% reduction in fuel price was forecasted, decreasing from YER 590/L to YER 512/L or from YER 11,800/20L to YER 10,240/20L. The further fuel price reduction was also modelled based on historic reductions between four-week recovery periods and post-port disruption periods. The modelling estimates a further 6% reduction in fuel prices from YER 512/L to YER 483/L or from YER 10,240/20L to YER 9,660/20L. Overall a 17% total reduction in the Yemeni rial fuel price was forecasted between the end of disruption (YER 590/L) and post-port disruption periods (YER 483/L).

Table 3. Historic DFA fuel price reduction post-port disruption (in YER).

PORT DISRUPTION	RECOVERY FUEL PRICE (YER/L)	POST-PORT DISRUPTION FUEL PRICE (YER/L)	% DECREASE
March–April 2019	430	406	5.6%
September–October 2019	457	372	18.6%
June–October 2020	366	359	1.9%
January–August 2021 (forecast)	512	483	5.7%

This modelling highlights that after a period of significant fuel price reduction in the four weeks following disruption, prices during the post-port disruption period are likely to continue to decrease further.

The values in USD were also calculated using the given exchange rate values.

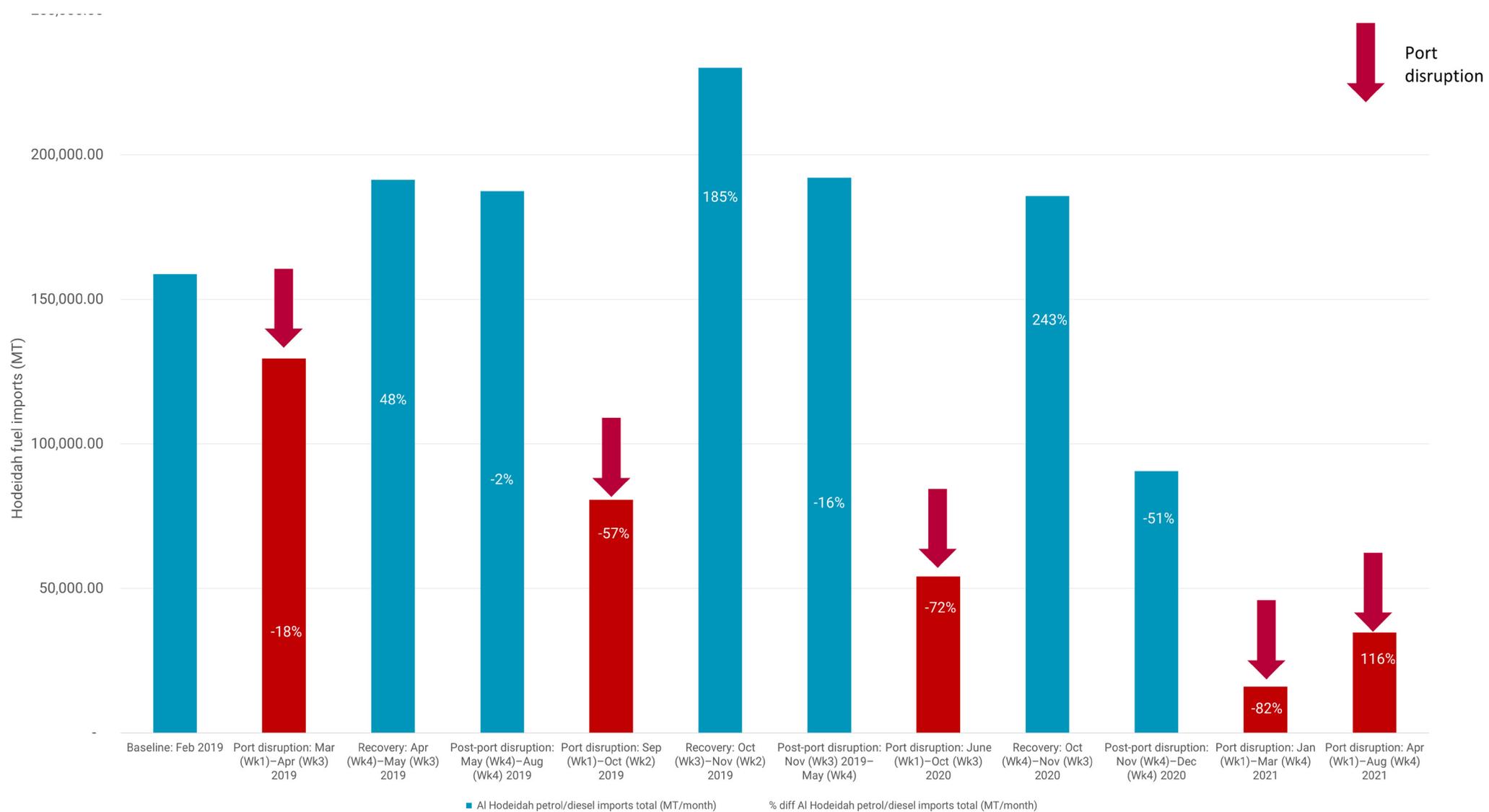
Table 4. Historic DFA fuel price reduction during the four-week recovery period (in USD).

PORT DISRUPTION	YER TO USD EXCHANGE RATE	PORT DISRUPTION FUEL PRICE (USD/L)	RECOVERY FUEL PRICE (USD/L)	% DECREASE
March–April 2019	550	0.83	0.81	2.4%
September–October 2019	598	0.92	0.79	14.1%
June–October 2020	610	0.79	0.60	24.0%
January–August 2021 (forecast)	599	0.98	0.85	13.3%

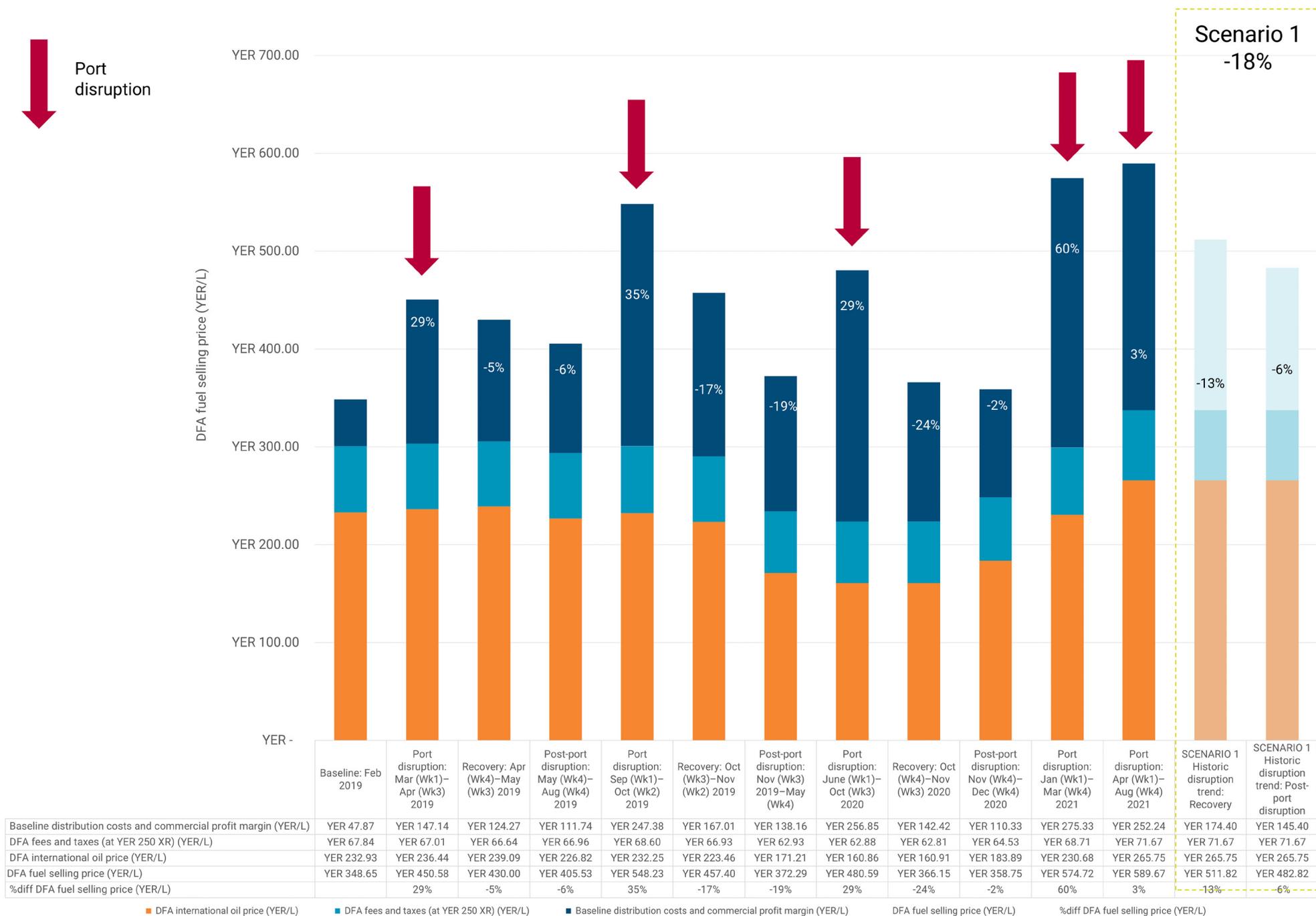
Table 5. Historic DFA fuel price reduction post-port disruption (in USD).

PORT DISRUPTION	YER TO USD EXCHANGE RATE	PORT DISRUPTION FUEL PRICE (USD/L)	RECOVERY FUEL PRICE (USD/L)	% DECREASE
March–April 2019	533	0.81	0.71	12.3%
September–October 2019	578	0.79	0.63	20.3%
June–October 2020	608	0.60	0.60	0%
January–August 2021 (forecast)	599	0.85	0.81	4.7%

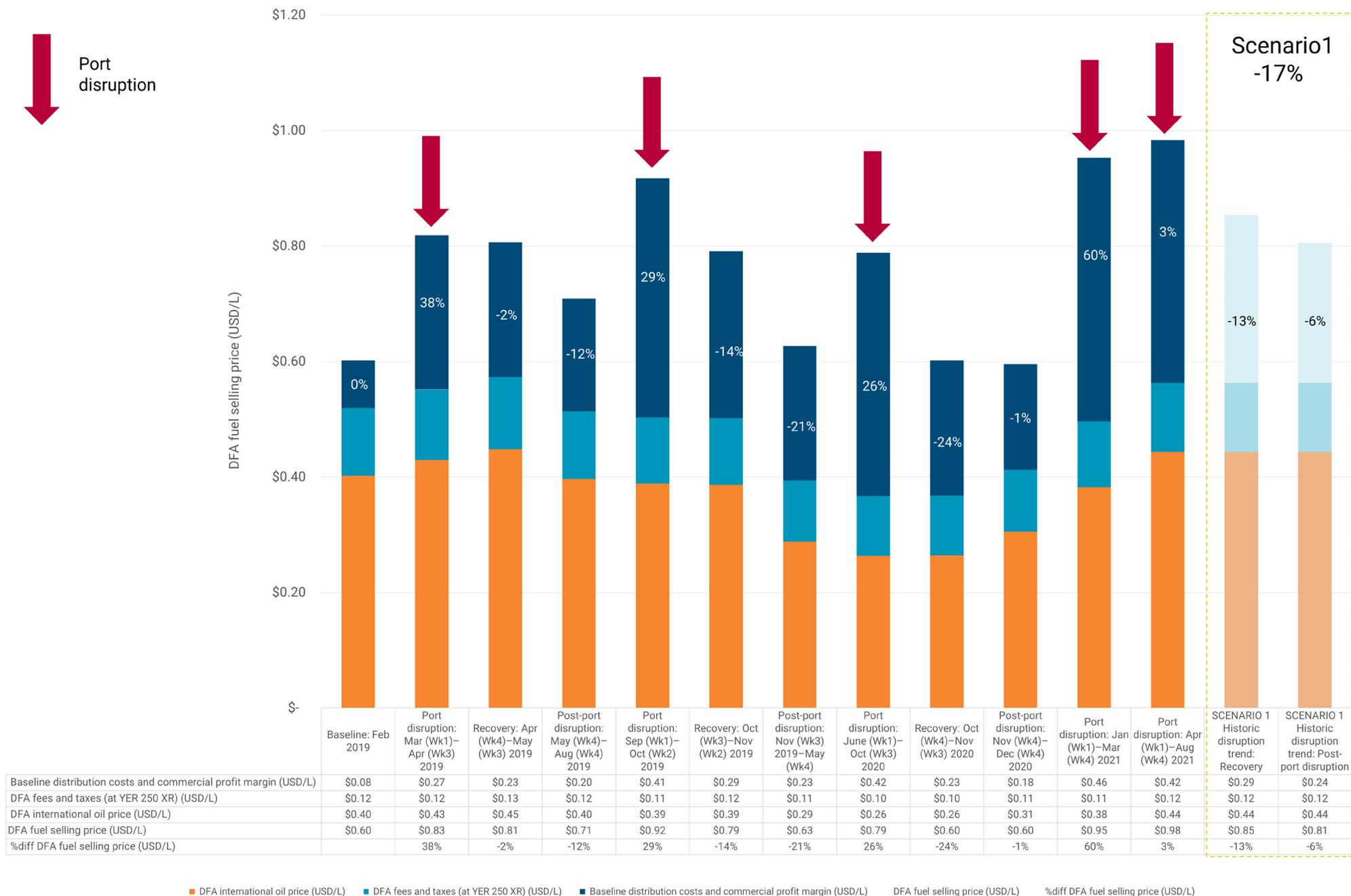
Graph 1. Monthly average of Al Hodeidah fuel imports per period (in MT).



Graph 2. Average DFA fuel selling price per period (in YER/L).



Graph 3. Average DFA fuel selling price per period (in USD/L).



## Analysis: Al Hodeidah fuel imports per period (Graph 1)

Graph 1 shows the monthly average of Al Hodeidah fuel imports for each period. Disruption periods are in red with red arrows.

### Key findings and analysis

- Port disruptions resulted in an average of 70% import volume reduction into Al Hodeidah. This decrease exempts excludes the disruption from March–April 2019, during which import quantities were not significantly affected despite the port disruption increasing fuel prices.
- Recovery and post-port disruption periods saw a significant increase in imports into Al Hodeidah ports.
- There is a downward trend between port disruption and post-port disruption periods. Import quantities did not tend to reach pre-port disruption levels.

## Analysis: average DFA fuel selling price per period (Graphs 2 and 3)

Graphs 2 and 3 show the average DFA fuel selling price for each period in YER and USD. Port disruption periods are highlighted with red arrows, while forecast scenarios are in pale colours. DFA fees and taxes are included.

For DFA areas, fuel import taxes and customs are calculated as a percentage of the total shipment. Taxes and fees are calculated as follows:

- customs = 5% for diesel; 10% for petrol
- fuel import taxes = 11.4%.

Calculations are based on the following exchange rates:

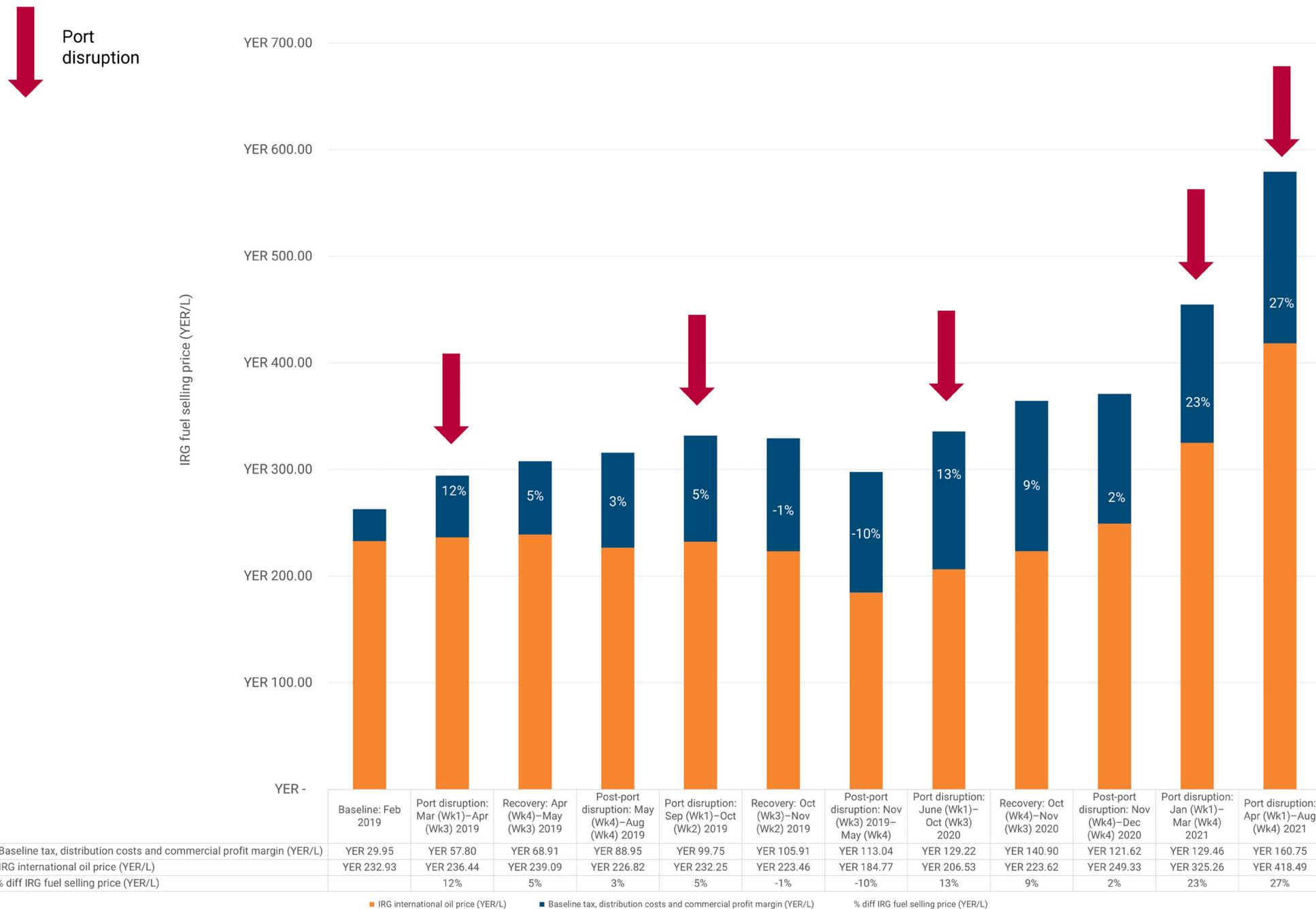
- before July 2021: YER 250 per USD 1
- after July 2021: 500 per USD 1.

### Key findings and analysis

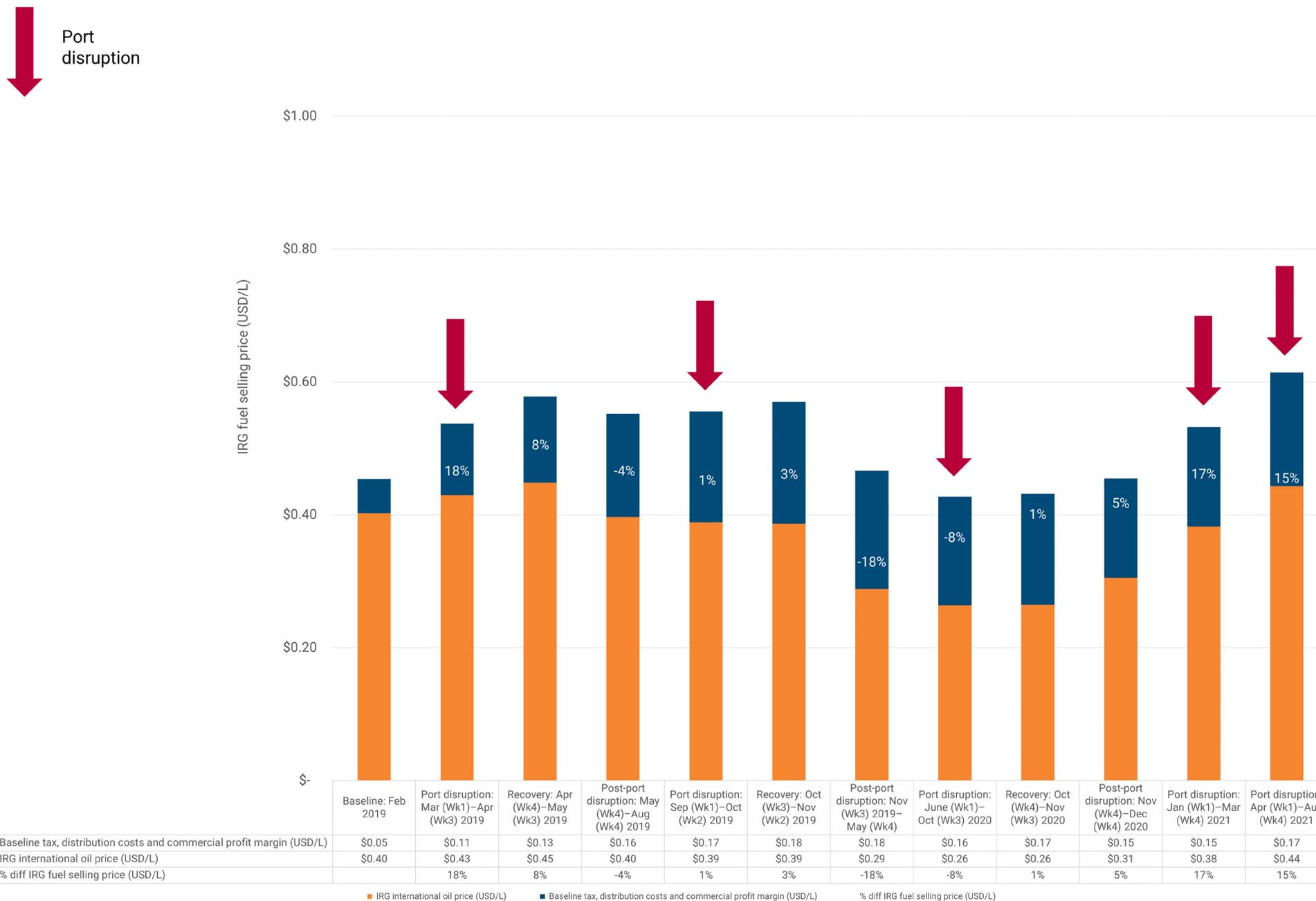
- Port disruptions resulted in an average fuel selling price increase of 38%.
- There is a correlation between a reduction in imports and an increase in the selling price of fuel.
- DFA parallel market or commercial rate fuel prices could decrease by 18% to YER 483/L if the disruption period, ongoing since January 2021, ends.
- During the current disruption period, DFA fuel prices have increased by 64%. A return to previous fuel price levels is unlikely as a result of an increase in international oil prices and the raising of the official YPC fuel price.
- The longer a port disruption period lasts, the higher the likelihood that DFA fuel prices will remain above pre-disruption levels.
- The disruption has significantly impacted DFA revenues from Al Hodeidah port. This loss is offset by increased fuel prices at YPC and privately owned fuel stations in DFA areas for fuel imported via Aden and Mukalla ports then trucked to DFA areas. The higher fuel prices in DFA areas are also the result of the added cost of importing fuel through non-DFA ports and then trucking the fuel overland to DFA areas. Among these logistical costs are added overland transport costs and double taxation.

The stability of the exchange rate in DFA areas means the selling price of fuel in YER and USD remains aligned. The analysis for IRG areas will significantly differ given the depreciation of the rial in IRG areas. The depreciation of the rial in IRG areas is a key driver for increased fuel transportation from IRG to DFA areas.

Graph 4. Average IRG fuel selling price per period (in YER/L).



Graph 5. Average IRG fuel selling price per period (in USD/L).



## Analysis: average IRG fuel selling price per period (Graphs 4 and 5)

Graphs 4 and 5 show the average IRG fuel selling price for each period in YER and USD. Port disruption periods are highlighted with red arrows. Forecast scenarios were not included as there is no clear correlation between the Al Hodeidah port disruption and the consumer selling price. There are occasional supply disruptions to local fuel markets in Aden and Mukalla as a result of fuel traders wanting to send fuel to DFA areas, where they can make more profit.

### Key findings and analysis

- There is no correlation between a reduction in Al Hodeidah imports and the IRG parallel market selling price of fuel.
- The conversion of fuel price from YER to USD shows that the IRG selling price of fuel tracks the international oil price.
- Removing the Al Hodeidah port disruption is unlikely to significantly influence IRG fuel revenues from Mukalla and Aden ports. However, import tax and customs revenues will be impacted.
- International oil prices and the rial exchange rate influence fuel price dynamics in IRG areas far more than in DFA areas.
- Removing restrictions would unlikely have a significant impact on foreign exchange rate in the south.

## OUTLOOK FOR 2022

The primary research objective was to determine the impacts of the easing of the disruption to Al Hodeidah fuel imports since January 2021 on fuel prices and revenues in DFA and IRG areas.

Should the suspension of fuel imports through Al Hodeidah port be removed and import volumes return to pre-June 2020 levels:

- The DFA selling price of fuel could decrease by 18%.
- Only the DFA would charge import duty, and distribution costs through DFA areas would come down. This outcome would provide the scope for the DFA to reduce prices without loss of revenue, although prices are unlikely to return to mid-2020 levels.
- IRG fuel prices are unlikely to decrease, as there is no clear sustained correlation between a reduction in Al Hodeidah imports and the selling price of fuel. International oil prices and the rial exchange rate influence fuel price dynamics in IRG areas far more than in DFA areas.
- The IRG would lose the import duty on fuel bound for DFA areas. A reduction of fuel imports via Aden and Mukalla ports as a result of more fuel being imported via Al Hodeidah could reduce IRG tax and customs revenues by USD 11 million per month. More new rial banknotes might be printed to finance public salaries, leading to further currency depreciation and price inflation in IRG areas.
- The economic incentive received in the southern ports to transport fuel to DFA areas would be lowered, reducing the fuel shortage in IRG areas.

If the fuel import limitations at Al Hodeidah port continue, access to fuel is expected to remain difficult and that affect the Yemeni people and their livelihoods. For further information on the humanitarian impact of the disruption at Al Hodeidah port, see the ACAPS fuel dynamics report from August 2021 (ACAPS 17/08/2021):

- **Fuel prices for consumers in DFA areas will likely remain high, while public sector salaries will continue to go unpaid and income opportunities remain lacking.** While fuel will be available and no shortages will be observed, the higher prices consumers have to pay for fuel will negatively impact purchasing power in DFA areas, especially those whose salaries have not been paid for some time and where alternative income options are lacking.

- **Service provision will likely see further disruption.** Services that rely on an uninterrupted power supply, such as hospitals, have seen their operations be affected by fuel shortages even before the embargo at Al Hodeidah. The continued lack of affordable fuel might further limit the extent and kind of services that health facilities can offer. The same applies to the provision of clean drinking water at affordable prices, which might be affected by rising costs for water pumping and trucking.
- **With rising transportation costs, access to services will become more difficult.** People will, for example, likely refrain from seeking lifesaving assistance and medical treatment, as has been reported already (HI 01/07/2021). Access to other services and support programmes, such as food and voucher distribution points, will likely decrease as well because of transportation costs, increasing social and economic risks for people.
- **Businesses will likely reduce their production and supply capacity.** Price increases also affect private sector businesses whose goods need to be transported or who use fuel as a major input for running their production lines or services. Fuel price increases or limited access to fuel could disrupt supply chains to local markets and hence the availability of certain goods, affecting the production capacity of businesses and potentially limiting livelihood opportunities.
- **Agricultural production will likely be affected by high fuel prices.** The cost of irrigating land outside the rainy season, coupled with increased costs for transport and agricultural inputs, could significantly reduce production on the part of the agricultural land in Yemen reliant on irrigation (KIIs 05/2021).
- **Despite increased DFA revenue generation through fuel imports, revenues will likely not be used for salary payment, keeping the purchasing power of public sector employees limited.** Improving or supporting salary payment regimes or funding formal social protection measures (and potentially alleviating the existing needs of the population and decreasing the number of people in need) is unlikely.
- **High fuel prices throughout the country, relative to the cost of living and income levels in Yemen, will likely remain.** Fuel prices per litre for the end consumer are high compared to the international market (Global Petrol Prices accessed 02/08/2021). Reliable Consumer Price Index data for Yemen is not available, but prices will likely make fuel unaffordable for many. A change in the price structure and the potential lowering of prices seem unlikely in the near future.
- **The costs of implementing humanitarian operations in the country will likely rise.** Increasing operating costs are expected to affect humanitarian budgeting and programme implementation in all sectors of intervention. Higher fuel prices will lead to price increases for transportation and humanitarian activities, such as food distribution, flour milling, ventilated storage of goods, generator-powered activities, and the running of hospitals and health services. Fuel shortages, high prices, and associated restrictions in staff mobility might limit the range of support offered.

## LIMITATIONS

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- There is a lack of transparency on this topic given its politically and economically sensitive nature.
- The current crisis in Ukraine has significantly impacted international oil prices. This modelling does not take these significant fluctuations into account.
- This modelling focuses on the disruption at Hodeidah port and does not take into account the impact of overland supply disruption on fuel prices.
- There are further opportunities to integrate variables within the model. These opportunities include macro-economic factors including exchange rate dynamics, international oil prices and operational costs, such as war risk insurance and demurrage.
- Forecasting scenarios do not consider variables such as war risk insurance, demurrage, fluctuations in international oil prices or in country fuel reserves.
- The scenarios also assume that the overland trucking of fuel would significantly decrease were Al Hodeidah port restrictions lifted.

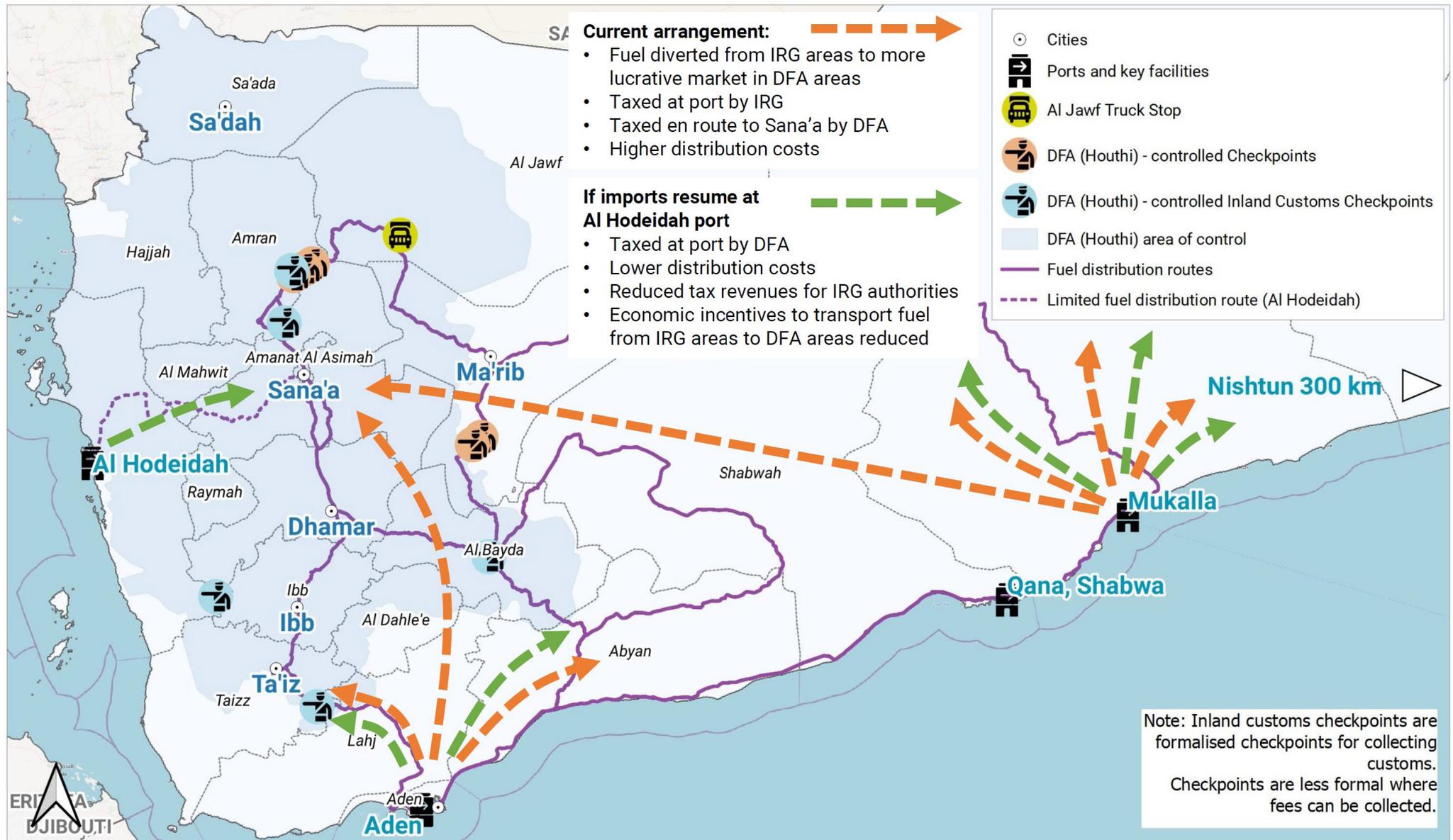
## ANNEX I: AL HODEIDAH FUEL IMPORT TIMELINE AND PERIODS OF INTEREST

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- **Pre-conflict**
  - The price of fuel before the conflict was YER 3,500 per 20 litres, a price maintained through the subsidisation of fuel prices.
- **July 2015**
  - The DFA announced the removal of fuel subsidies and liberalisation of fuel imports and distribution.
- **July 2018**
  - The DFA reinstated the DFA-run YPC as the main authorised distributor in DFA areas.
- **October 2018**
  - The IRG started implementing new fuel import regulations as per Decree 75 announced in September 2018.
- **March–April 2019**
  - There was a build-up of fuel vessels in the Coalition Holding Area after the DFA instructed Al Hodeidah fuel importers against submitting fuel import applications to the IRG Technical Office in response to Decree 75. In exchange, the DFA-run YPC covered importers' demurrage costs.

- There was a disruption to fuel supplied to local markets in DFA areas and a notable increase in diesel and petrol prices in weeks 2 and 3 of April 2019.
  - The pressure that the DFA applied did not yield the desired results – i.e. the rolling back or removal of Decree 75 and continued entry of fuel via Al Hodeidah. The DFA and YPC coordinated the increased supply of fuel to local markets in DFA areas and lower fuel prices.
  - **July 2019**
    - The IRG introduced Decree 49, making it obligatory for fuel importers to pay fuel import taxes and customs.
  - **August 2019**
    - The IRG started implementing Decree 49 alongside Decree 75 but was unable to enforce Decree 49 for Al Hodeidah fuel imports.
  - **September 2019**
    - There was a reduction of fuel import activity via Al Hodeidah, as fuel importers were encouraged by the YPC to respond to Decree 49 (which the IRG implemented in August 2021).
  - **October 2019**
    - Following OSESGY mediation efforts, the disruption was eased at the beginning of October 2019 as the IRG issued clearances for fuel shipments to Al Hodeidah without the imposition of Decree 49 (and without the need for payment of import taxes and customs to IRG).
    - Fuel prices in some DFA areas increased in weeks 1 and 2 of October 2019.
    - OSESGY continued mediation efforts between the IRG and the DFA.
  - **November 2019 to May 2020**
    - OSESGY brokered the Al Hodeidah fuel import mechanism in November 2019 and saw fuel traders that imported via Al Hodeidah paying import taxes and customs into a 'special account' at the Central Bank of Yemen branch in Al Hodeidah.
- March–May 2020**
- Global fuel prices plummeted in March and April 2020.
  - On 16 April 2021, the DFA announced withdrawing funds deposited in the 'special account', and the OSESGY Al Hodeidah fuel import mechanism unravelled.
- **June–September 2020**
    - The IRG suspended all fuel import activity to Al Hodeidah in June 2020.
    - The IRG issued clearances for fuel shipments at the beginning of July 2020 but then pursued a strategy of encouraging increased import activity via ports not under Houthi control (Aden and Mukalla ports) to mitigate reduced import activity at Al Hodeidah till the end of September 2020.
  - **October 2020 to January 2021**
    - The IRG issued regular clearances for Al Hodeidah-bound fuel shipment from October 2020 till the end of December 2020.
  - **January–October 2021**
    - The IRG authorised increased import activity via Aden and Mukalla (as well as Nishtun and Qana) to mitigate reduced import activity via Al Hodeidah port.
    - On 20 April 2021, the YPC reopened several YPC fuel stations in Sana'a and sold petrol and diesel at a rate of YER 11,000 per 20 litres over a 48-hour period before closing stations again.
    - On 11 June 2021, the YPC announced an increase of official petrol and diesel prices from YER 5,900 to YER 8,500 for 20 litres of petrol and from YER 5,900 to YER 7,900 for 20 litres of diesel.
    - On 11–13 October 2021, the Houthi-run YPC circulated a list of YPC stations that operated as YPC agents to sell fuel (petrol and diesel) at the official price of YER 8,500 per 20 litres. The circulars stated the set hours that fuel would be available.
  - **April 2022**
    - The DFA and the Saudi-led coalition agreed a two-month nationwide truce. The deal includes allowing fuel ships to enter Al Hodeidah port and offers a key opportunity for the reduction of commercial fuel prices in DFA controlled areas.

## SHIFTS IN MAIN OVERLAND FUEL DISTRIBUTION ROUTES



Source: ACAPS discussions with operational partners.