Humanitarian Challenges and the Targeting of Civilian Infrastructure in the Yemen War

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Project motivation and cases

• Targeting of civilian infrastructure as a central feature of post-2011 wars in Middle East.

• Track energy, water and sanitation, agriculture, and health systems essential for livelihoods, economic activity, and ecosystems

• Understand risks and constraints for environmental peacebuilding

• Iraq (1991 Gulf War- present)
• West Bank and Gaza (2000-present)
• Yemen (2011-present)
• Syria (2011-present)
• Libya (2011-present)
Data collection and methods

• Database coding discrete episodes of targeting energy, water, health, agriculture and transport systems
  • Sources: OCHA, ACLED, CIMP after 2018, HRW, Amnesty, PHR, open news sources (English/Arabic). YDP data included where verified.

• Document collection on cumulative effects

• Fieldwork/interviews with humanitarian and international organizations

Photo credit: UNOCHA, 2017
“There is so much destruction….much of the infrastructure is not operable…Basic systems that underpin human rights have been rendered not functional.”

-- Interview with the authors, WFP official after 4 years in Yemen.

“It’s the war that’s pushing Yemen towards famine. The economy is collapsing…. donors are offering much less help this year… what we’ve got now is the result of decisions taken by powerful people in Yemen and other countries…Those same powerful people could just as easily choose not to starve Yemen.”

`-- UN Emergency Relief Coordinator Mark Lowcock, 10 December 2020

Starvation as atrocity

(DeWaal, Mass Starvation, 2018)
Conflict-induced acute hunger in Yemen

IPC ACUTE FOOD INSECURITY ANALYSIS
OCTOBER 2020 – JUNE 2021
Issued December 2020

PROJECTED SITUATION: JANUARY - JUNE 2021

16.2M
54% of the population
analysed

People facing high
acute food insecurity
(IPC Phase 3 and above)

IN NEED OF URGENT
ACTION

<table>
<thead>
<tr>
<th>Phase</th>
<th>People In Food Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 5</td>
<td>47,000</td>
</tr>
<tr>
<td>Phase 4</td>
<td>5,058,000</td>
</tr>
<tr>
<td>Phase 3</td>
<td>11,042,000</td>
</tr>
<tr>
<td>Phase 2</td>
<td>8,644,500</td>
</tr>
<tr>
<td>Phase 1</td>
<td>5,258,000</td>
</tr>
</tbody>
</table>

Current Situation: October - December 2020

Projected Situation: January - June 2021
# Infrastructure targeted by sector, 2010-2019

## Infrastructure Targeted by Type

<table>
<thead>
<tr>
<th>Sector</th>
<th>Incidents</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture/fishing</td>
<td>1292</td>
<td>67%</td>
</tr>
<tr>
<td>Energy</td>
<td>150</td>
<td>8%</td>
</tr>
<tr>
<td>Health</td>
<td>128</td>
<td>7%</td>
</tr>
<tr>
<td>Transportation</td>
<td>266</td>
<td>14%</td>
</tr>
<tr>
<td>Water</td>
<td>105</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total Incidents</strong></td>
<td><strong>1941</strong></td>
<td></td>
</tr>
</tbody>
</table>

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![Bar chart showing the number of incidents by sector from 2010 to 2019.](chart.png)

- **Agriculture**: Black
- **Health**: Blue
- **Energy**: Green
- **Transportation**: Brown
- **Water**: Pink
Mapping Infrastructure Targeting in Yemen

Source: Authors’ database.
Years: 2010-2019
Actor Attribution: Issues and Findings

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Saudi-led coalition</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>110</td>
<td>64</td>
<td>528</td>
<td>461</td>
<td>140</td>
<td>1305</td>
<td>67.2%</td>
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<tr>
<td>Houthi forces</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>7</td>
<td>0</td>
<td>5</td>
<td>21</td>
<td>49</td>
<td>83</td>
<td>4.3%</td>
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<tr>
<td>Non-state armed groups</td>
<td>3</td>
<td>4</td>
<td>11</td>
<td>17</td>
<td>20</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>58</td>
<td>3.0%</td>
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<tr>
<td>Political Militias</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>19</td>
<td>57</td>
<td>76</td>
<td>76</td>
<td>3.9%</td>
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<tr>
<td>Hadi Forces</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>20</td>
<td>8</td>
<td>3</td>
<td>31</td>
<td>1.6%</td>
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<tr>
<td>Unknown</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>4</td>
<td>224</td>
<td>144</td>
<td>388</td>
<td>20.0%</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>5</td>
<td>15</td>
<td>19</td>
<td>23</td>
<td>126</td>
<td>65</td>
<td>557</td>
<td>733</td>
<td>394</td>
<td>1941</td>
<td>100%</td>
</tr>
</tbody>
</table>
Targeting agriculture and fishing

70% of population lives in rural areas.; over 50% employed in agriculture-related activities

Track targeting of farms, markets, flour mills, food-processing companies, fishing boats, poultry farms and livestock

Undermines livelihoods and increases internal displacement.

Fishing sector also targeted

Airstrike on cucumber farm
Photo by Taha al Surgbai, used with permission
Challenges for Humanitarian Assistance

Some of the largest donors are also major parties to the conflict.

Aid is much less than needed and much less than expenditures on the war.

Blockades on imports: UN monitoring system is no substitute for trade.

Diversions and obstructions of aid by parties to the conflict.

Local suspicion/concern over electronic tracking and biometrics.

Humanitarians targeted despite providing coordinates to Saudi-led coalition and others.
Implications for Environmental Peacebuilding

Sectoral linkages and reverberating effects:
• WB 2020 needs assessment, 16 Yemeni cities: Only 10% of energy facilities damaged but 85% of facilities not functioning due to lack of fuel.

Loss of livelihoods and ecosystem degradation:
• Collapse of water/sanitation → contamination of water and soils
• Degradation of forests and rangeland (overcutting for fuel, fodder, construction)

Damage to civilian infrastructure undermines resilience disease, disasters, and climate change
• Increased droughts, floods, and locust swarms.
• IDP’s particularly at risk
• Largest recorded cholera outbreak
To learn more/engage with our project:

- [https://sites.nicholas.duke.edu/time/](https://sites.nicholas.duke.edu/time/)
Thank you!

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