# Executive Summary:

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# Background:

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# Objective and Methodology:

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## Objective:

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## Methodology:

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# Area Infrastructure Findings and Community Profile:

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1. Ninawa Province

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2. Kirkuk Province

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3. Anbar Province

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4. Diyala Province

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5. Salah Al-Din Province

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# Key Findings:

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1. Ninewa Province

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2. Kirkuk Province

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3. Anbar Province

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4. Diyala Province

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5. Salah Al-Din Province

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# Recommendations:

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Executive Summary:

The ISIS control over the Ninewa and other major parts of Kirkuk, Salah Al-Din and Anbar provinces left nothing only a huge destruction to the area. Both the occupied areas by the ISIS and the following military process of Mosul Offensive Operation by the Iraqi Military Forces torn the infrastructure apart to a huge extent. Countless amounts of explosive hazards left both on the primary and secondary roads and under the rubbish of ruined infrastructures affected by the operations according to iMMAP’s Mobile Data Collection MDC team in the field. The humanitarian situation remained extremely volatile due to the tensions by the Government’s military operations, political and inter-groups. National and International Humanitarian efforts to help and support people affected by the repeated conflicts constituted the major and most intricate humanitarian operations in the area.

To respond in parallel with the current ongoing and growing humanitarian catastrophe, the iMMAP-IHF Multi-Dimensional Risk Mitigation Information Management Centre RMIMC for Humanitarian Access Response continue to rapidly assess the level of explosive contamination and its impact on the affected infrastructure to set up informed safety, security and risk management systems in new contexts and report back the outcomes to the concerned parties to take rapid onset emergency response to the contaminated areas and affected infrastructure.

iMMAP’s project for multi-dimensional risk mitigation information management through Iraq Humanitarian Fund IHF makes sure to provide the HAs with rapid assessment of explosive hazards in the inflicted areas and its impact on the infrastructure for the expedited response both by the protection actors and local authorities. The assessment tools used for this purpose conducted since last July 2018 on continuous basis by eclectic field experienced enumerators distributed in five governorates where completely or partially affected by ISIS and Iraqi Security Forces operations.

According to the key findings from the iMMAP MDC enumerators and respondents where the infrastructure assessments had been conducted, the majority of the infrastructures are completely or partially damaged or out of serve due to the consequent military operations and huge amount of confirmed/suspected explosive devices contaminating in/around the infrastructures. Most reported infrastructure assets demonstrate clear justifications that crucial and priority actions need to be taken by the concerned party to remove and clean them immediately in order to return the service provision to the affected community.
Background:

The official victory over ISIS was declared on December 10, 2017. The process of returning IDPs has begun on a scant scale and a big portion of IDPs is still unable and unwilling to return to their areas due to the contamination and huge damage incurred to the infrastructure in their living areas.

The security situation represents the most pressing problems in the liberated areas, which have caused the stagnation of the whole infrastructure development. Almost all parts of the areas affected by the military operations have incurred damage to the infrastructure, with some districts completely destroyed and requiring years to rebuild. The majority of inflicted infrastructures are health, education, transportation, working places, governmental buildings and religious and historical sites. According to the Ninewa governorates reconstruction committee, three-quarters of Mosul’s roads, almost all of its bridges, and 65 percent of its electrical network, have been destroyed. Much of the city’s water infrastructure has been booby trapped by militants. The city was home to 1.8 million, over 875,000 of whom are displaced. Many can’t return home because their houses or livelihoods are gone.

Both local authorities and humanitarian actors are working hard to meet the critical needs of vulnerable children, women and men displaced by the fighting and of those returning to their war-damaged homes providing urgent assistances to the affected communities, the major issues are still the huge infrastructure destruction of schools, water supplies, power stations and acute health facilities. Humanitarian partners provide emergency food, water and essential items.

Objective and Methodology:

Objective:

iMMAP-IHF project is operating through its eclectic experienced Mobile Data Collection MDC team in the war-torn and insecure areas in/around Ninewa, Kirkuk, Anbar, Diyala and Salah Al-Din provinces since May 2018, to collect real time explosive hazard data and evaluate the impact on humanitarian access and vulnerable people and assess the threat impacted on the infrastructure then send all the garnered real time data in the fields to the iMMAP office to process them for cleaning, validation, integration, analyzation and effectiveness and produce immediate analytical reports and informative maps to the humanitarian partners and local authorities to respond and take required immediate measures.
Methodology:

In preparation for the assessment course and based on the requirements iMMAP-IHF started on July 1st, 2018 to assess the major affected infrastructures mainly those that provide essential services to the communities and vulnerables and share the analytical findings with the concerned parties to take immediate required measurements. iMMAP-IHF designed the required tools to ensure sufficient data related to the targeted infrastructure is collected and the following steps are taken for the assessment tools:

1- Assessment questions are developed based on the lessons learned from previous assessments in the field and eclectic experiences of project staff to develop most crucial questions that deemed necessary to get the worth data for reporting and sharing.

2- Developed questions are then digitized and related online form using KoboCollect Application is developed for the assessment questionnaire.

3- Field enumerators were called for an extensive one-day training to tailor them on the use of the tools and derive the required outcomes from the survey questions.
Methodology (Cont.):

4- Extensive and comprehensive internal methodology and mechanism for the required infrastructure data are set up using iMMAP’s sources of:

A- Security Incident Data.
B- Real Time Mobile Data Collection Data.
C- Desktop survey data.

5- Based on the internal methodology and mechanism enumerators deployed to the targeted areas.

6- Data on the crucial targeted infrastructures were collected by the enumerators in the field and sent remotely to iMMAP’s designed database for the cleanup process.

7- iMMAP’s internal project staff started with cleaning the data and assess the effectiveness of the reported data on the infrastructure.

8- The final stage started with generating the risk profile and report on the findings and then the final outcome in the shape of infographic and report was shared through an online platform with related humanitarian partners and local authorities for the relevant measurements and actions.
## Area Infrastructure Findings and Community Profile:

### 1. Ninewa Province

<table>
<thead>
<tr>
<th>Date</th>
<th>Governorate</th>
<th>District</th>
<th>Type of beneficiary</th>
<th>Targeted Area</th>
<th>Infrastructure Sub-categories</th>
<th>Scale of damage</th>
<th>Infrastructure Picture</th>
<th>Infrastructure Latitude</th>
<th>Infrastructure Longitude</th>
<th>Type of explosive hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4/2018</td>
<td>Ninewa</td>
<td>Mosul</td>
<td>Civilian Governmental employee</td>
<td>Urban</td>
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<td>Mosul</td>
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<td>School building</td>
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<td>Mosul</td>
<td>Criminal Returnees</td>
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<td>Buildings frequented or occupied by returnees</td>
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<td>Mosul</td>
<td>Civilian</td>
<td>Urban</td>
<td>Primary returnee areas</td>
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<td>Criminal Returnees</td>
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<th>Governorate</th>
<th>District</th>
<th>Type of beneficiary</th>
<th>Targeted Area</th>
<th>Infrastructure Sub-categories</th>
<th>Scale of damage</th>
<th>Infrastructure Picture</th>
<th>Infrastructure Latitude</th>
<th>Infrastructure Longitude</th>
<th>Type of explosive hazards</th>
</tr>
</thead>
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<tr>
<td>7/9/2018</td>
<td>Kirkuk</td>
<td>Bakes</td>
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<td>Triadan posthouse</td>
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<td>Kirkuk</td>
<td>Bakes</td>
<td>Civilian</td>
<td>Rural</td>
<td>Watering station</td>
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### 3. Anbar Province

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<th>District</th>
<th>Type of beneficiary</th>
<th>Targeted Area</th>
<th>Infrastructure Sub-categories</th>
<th>Scale of damage</th>
<th>Infrastructure Picture</th>
<th>Infrastructure Latitude</th>
<th>Infrastructure Longitude</th>
<th>Type of explosive hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/12/2018</td>
<td>Anbar</td>
<td>Ramadi</td>
<td>Civilian IEP Returnees Local Governmental employee</td>
<td>Urban</td>
<td>School building</td>
<td>Complete damage</td>
<td><img src="image9" alt="image" /></td>
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<td>Ramadi</td>
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<td>Ramadi</td>
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<td>Bridges</td>
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<td>Ramadi</td>
<td>Civilian IEP Returnees Local Governmental employee</td>
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### 4. Diyala Province

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<th>Type of beneficiary</th>
<th>Targeted Area</th>
<th>Infrastructure Sub-categories</th>
<th>Scale of damage</th>
<th>Infrastructure Picture</th>
<th>Infrastructure Latitude</th>
<th>Infrastructure Longitude</th>
<th>Type of explosive hazards</th>
</tr>
</thead>
<tbody>
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<td>Diyala</td>
<td>Nahoset</td>
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<td>Rural</td>
<td>School building</td>
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<td>7/12/2018</td>
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<td>Khanaqin</td>
<td>Civilian</td>
<td>Rural</td>
<td>Tribunal house</td>
<td>Complete damage</td>
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</tr>
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<td>Khanaqin</td>
<td>Civilian IEP Returnees Local Governmental employee</td>
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### 5. Salah Al-Din Province

<table>
<thead>
<tr>
<th>Date</th>
<th>Governorate</th>
<th>District</th>
<th>Type of beneficiary</th>
<th>Targeted Area</th>
<th>Infrastructure Sub-categories</th>
<th>Scale of damage</th>
<th>Infrastructure Picture</th>
<th>Infrastructure Latitude</th>
<th>Infrastructure Longitude</th>
<th>Type of explosive hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/1/2018</td>
<td>Salah Al-Din</td>
<td>Balid</td>
<td>Civilian</td>
<td>Rural</td>
<td>Route frequented or occupied by returnees</td>
<td>Partial damage</td>
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<td>Suspected location</td>
</tr>
<tr>
<td>7/1/2018</td>
<td>Salah Al-Din</td>
<td>Al-Bair</td>
<td>Civilian</td>
<td>Rural</td>
<td>Triadan posthouse</td>
<td>Complete damage</td>
<td><img src="image17" alt="image" /></td>
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<td>Suspected location</td>
</tr>
<tr>
<td>7/1/2018</td>
<td>Salah Al-Din</td>
<td>Al-Bair</td>
<td>Governmental employee</td>
<td>Rural</td>
<td>Government building</td>
<td>Complete damage</td>
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<tr>
<td>7/1/2018</td>
<td>Salah Al-Din</td>
<td>Al-Bair</td>
<td>Governmental employee</td>
<td>Rural</td>
<td>School Store&lt;br&gt;Building</td>
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<td>43.27091894</td>
<td>Suspected location</td>
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</table>
Maps on Affected Infrastructure:

IMMAP-IHF, Humanitarian Access Response: Infrastructure Data from Mobile Data Collection (MDC) in Ninewa Governorate

Legend

- Infrastructure Data July 2018
- Complete damage
- Partial damage
- Governorate Center
- Governorate Boundary
- District Boundary

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IMMAP-IHF, Humanitarian Access Response: Infrastructure Data from Mobile Data Collection (MDC) in Diyala, Salah Al-Din, Anbar Governorate

Legend

- Infrastructure Data July 2018
- Complete damage
- Partial damage
- Governorate Center
- Governorate Boundary
- District Boundary

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Key Findings:

During iMMAP’s MDC enumerators’ site visit to the war affected locations in Ninewa, Kirkuk, Anbar, Diyala and Salah Al-Din provinces and apart from the respondents’ feedback, they encountered numerous completely/partially damaged infrastructural assets including residential buildings, administrative buildings, bridges, hospitals, schools, power stations, water stations etc... The infrastructural assets provide daily livelihood provision to the local residents. However, they are dysfunctional mainly because of the huge confirmed/suspected explosive remnants of war in/around those affected assets consequently iMMAP urges humanitarian partners to take immediate action to resort the indispensable services provided by the affected infrastructure assets and urge local citizens to return and start their normal daily life again.

1. Ninewa Province

iMMAP’s major focus for conducting infrastructure assessments was mainly on Ninewa province than other provinces as Ninewa was broadly affected by ISIS occupation and later by the military operation to oust them. The enumerators in Ninewa province placed focus on the Mosul city for their field visit both on collecting explosive hazards and assessing the infrastructure assets as Mosul city has a dense population with a majority wave of returnees to the area and a big scale of infrastructure affected by the ISIS occupation and Iraqi liberation operations. Aside from the other reports, the enumerators conducted assessments on infrastructure assets that are of high importance to the community and not reported to any relevant authority to take immediate actions, consequently they found out that 70% of the routes and sub-routes frequently occupied by the returnees are damaged and contaminated with confirmed/suspected explosive hazards which eventually makes difficult for the IDPs to return to their homes and for the humanitarian partners to focus and provide immediate support to the vulnerables living in those vicinities. The sub/routes provide daily access and passage to approx. 4,200 grassroots from the areas. They also found two damaged schools which provide education services to around 700 pupils and a damaged dormitory building which provide residency services to around 600 students.

2. Kirkuk Province

The MDC enumerators visited Dabes district for their survey work purpose and came across a water station which deemed crucial asset for providing potable water to around 2000 locals from the area. They also found a partially damaged tribal guest house. The guest house is used by the locals as a hub for discussing and resolving their daily issues. Aside from the field visit to Dabes district, the iMMAP MDC enumerators also visited the southern and western areas of Kirkuk province which were reached by ISIS groups. On Daquq district border nearly 50 villages were exposed to damages, 90% of their infrastructure is hugely affected. On the boundary of Taza subdistrict, some villages like (Al Basheer) as one of the largest villages of Iraq is planted with more than a thousand of explosive devices and its infrastructure is almost in a complete damage with almost a thousand houses were completely destroyed by ISIS. Hawija district and its surrounding areas were under ISIS control for more than three years, therefore, most of its residents are IDPs now and are unable to return to practice their daily life, thousands of young men, women, and mothers live in the camps and are unemployed which by the passage of time is going to force them to emigrate.
3. Anbar Province

During the iMMAP-IHF enumerators visit to Ramadi district they encountered a huge destruction to the buildings in the area, more than 70 percent of the Anbar capitol remains damaged or destroyed, according to the provincial council members. There are still other important infrastructure assets which were not approached by any pertinent local authorities and no international efforts were made to rebuild or renovate them. Some schools were partially and others completely destroyed by the attacks. During the survey, the team found out two unreported schools which provide education to around 1200 pupils and a complete destroyed bridge which links two major routes between Ramadi and Felluja districts and considered as an international route used for transportation and business purposes and provides countless of access services to roughly 70,000 local pedestrians and drivers on daily basis.

4. Diyala Province

The majority of the urban areas in Diyala province was affected by operations and there are still ongoing sporadic attacks expected to be by ISIS, the team found out two unreported schools which were completely damaged by the operations and they provide education services to around 800 students, they also found two tribal guest houses used as a center of rapprochement and communications on daily issues by the locals living in/around the area.

5. Salah Al-Din Province

The enumerators in Salah Al-Din province placed the focus on rural areas as they were hugely affected by the military operations against the ISIS, they came across a school store which was completely damaged by the attack, the respondents referenced that no local or international approach is offering to foot the bill to rebuild it and the school store provides education supply services to almost 5000 local pupils in/around the area. The team also found a completely damaged tribe guest house and two governmental buildings consisted of a court and police station which benefit around 1750 locals from the area. They are important assets which provide daily administrative services to the local communities in the area.
Recommendations:

- It is highly advised that the protection authorities and international mine action agencies take immediate action and measurement to remove/clean the infrastructure assets contaminated with explosive hazards and remnants of war.

- Emphasis should be placed on solid coordination and collaboration among the international humanitarian partners. It is highly advised that the humanitarian partners should enforce accurate and good coordination efforts to cover all infrastructure assets affected by the war and military operations.

- Urgent support and assistance should be made available and reaffirm if assistance well targeted to the affected communities across the areas.

- Scale up activities that support reconstruction and restoration of services to the unreported infrastructure assets in the areas affected by the war and military operations.

NOTES

1- For the accurate outlook of affected infrastructure photo please revert to the data provided in the tables above.
2- The percentage of the damages is based on the data collected as per the geographic covered locations by the MDC team in the field, they may not represent as exact and accurate as the factual one.