



# Geo-data usage during the Beirut Port Explosions

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**FIRST EXPERT FORUM FOR PRODUCERS AND USERS OF  
DISASTER-RELATED STATISTICS, ONLINE**

# BEIRUT PORT EXPLOSIONS

## WHAT HAPPENED?

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On 4 August 2020, a large concentration of ammonium nitrate ignited in a warehouse at the Beirut Port.



- Two devastating explosions destroyed most of the near -by facilities
- The explosions punched through buildings for miles around:
  - collapsing homes,
  - severely damaging shops, schools, and hospitals,
  - scattering debris
  - destroying the country's grain reserves stored at the Port's silos
  - destroying the MoPH central warehouse (where PPE & life -saving medicines and supplies, and vaccines are stored)

# BEIRUT PORT EXPLOSIONS

## IMPACT

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### IMPACT OF THE EXPLOSIONS



Nearly **200 people** killed and approximately **6,500 injured**.



Within a **3-kilometer radius** from the Port, **73,000 apartments** in **9,200 buildings damaged**, affecting **219,000 people**.



Over **70,000 workers** estimated to have lost their jobs, with direct implications for over **12,000 households**.



**15,000 metric tons** of grain reserves stocked at the Port lost.



At least **six hospitals** and **20 clinics damaged**; at least another **80 health care facilities** severely or partially damaged.



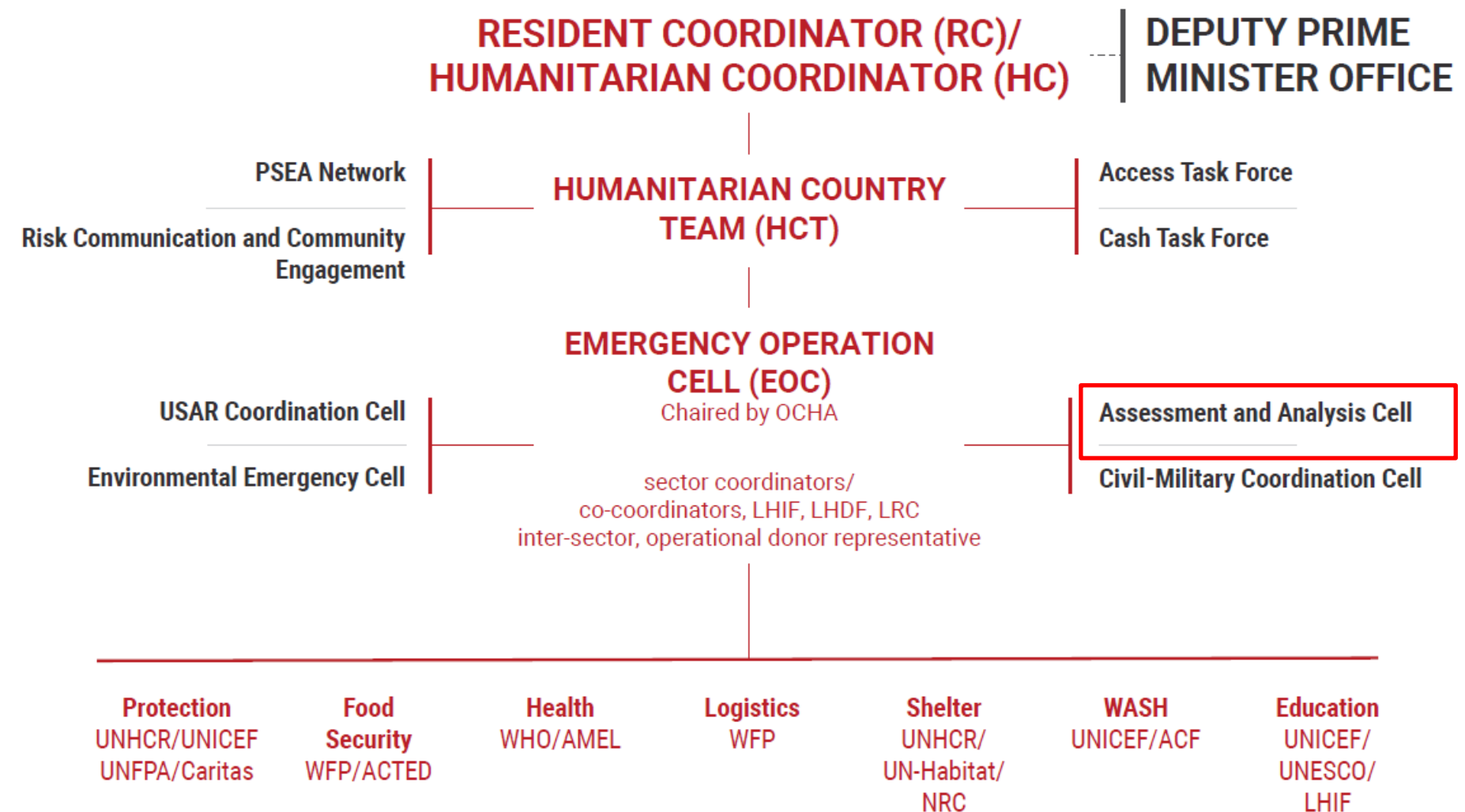
At least, **17 containers** of WHO essential medical supplies and PPE destroyed.



At least **163 public and private schools** damaged, including technical and vocational education and training

# BEIRUT PORT EXPLOSIONS

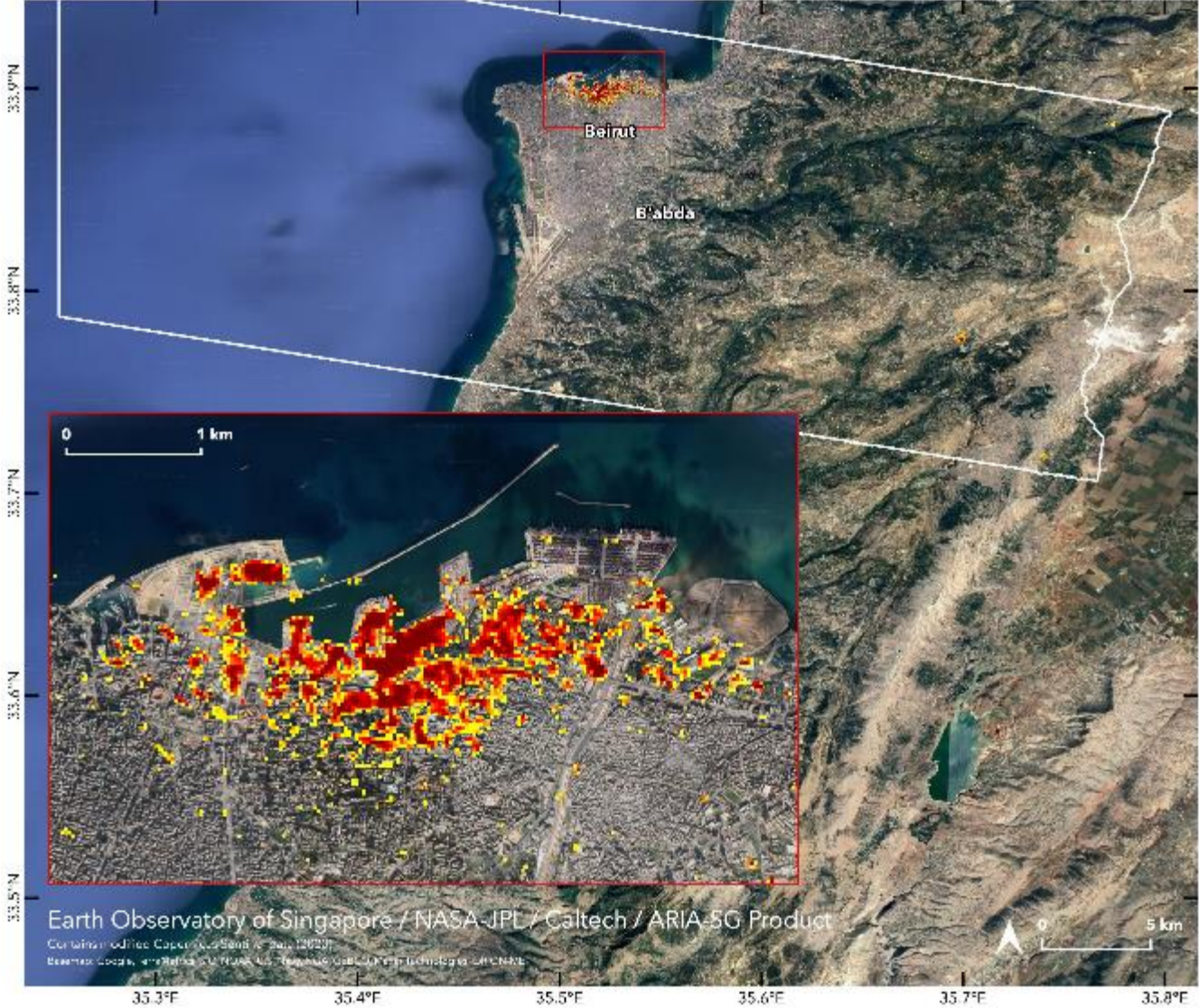
## COORDINATION STRUCTURE





# Usage of remote sensing data coupled with ground checking

## SATELLITE DATA ANALYSIS

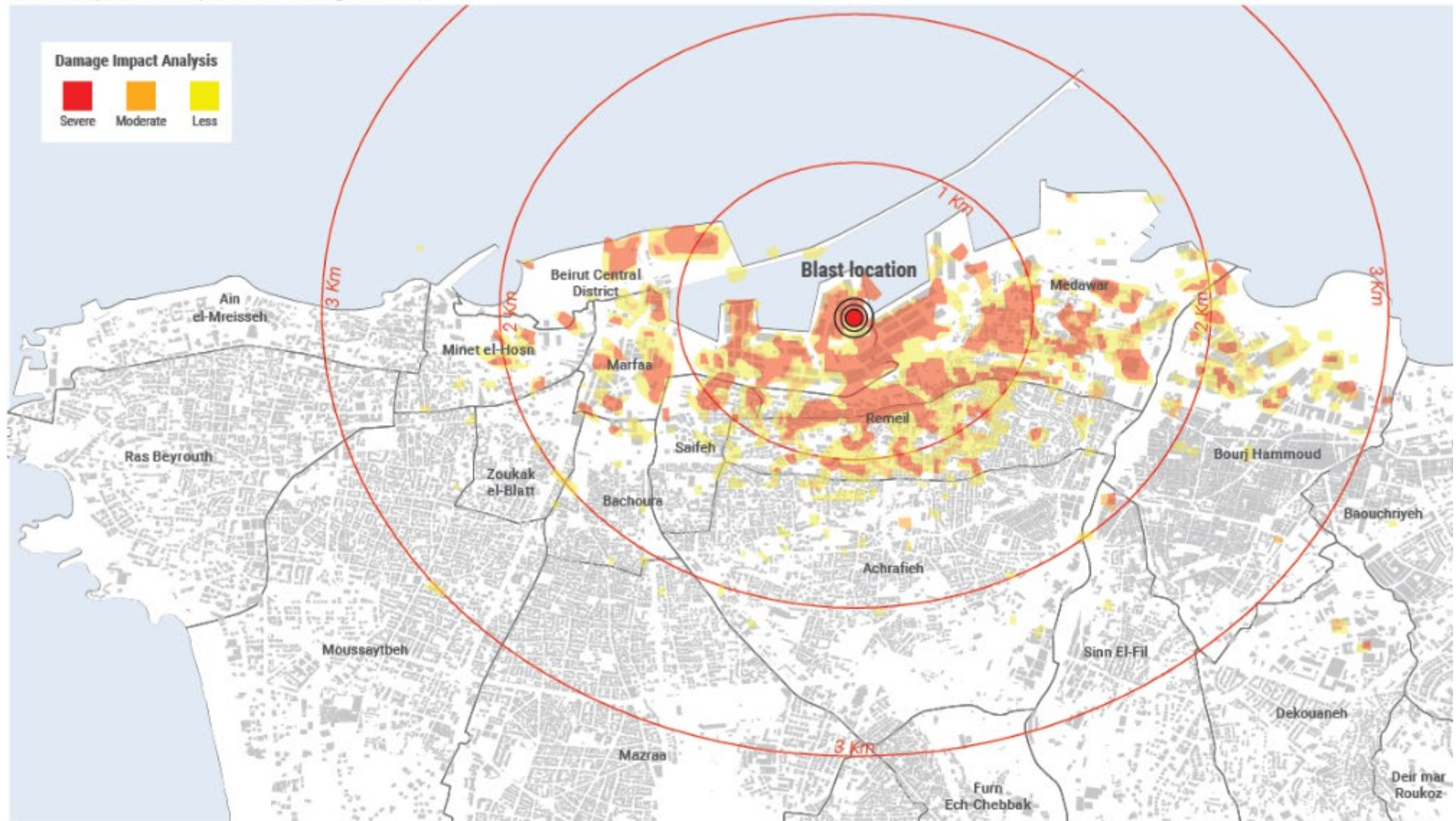




# DAMAGE IMPACT

## SATELLITE DATA ANALYSIS

Beirut explosions exposure on 4 August 2020



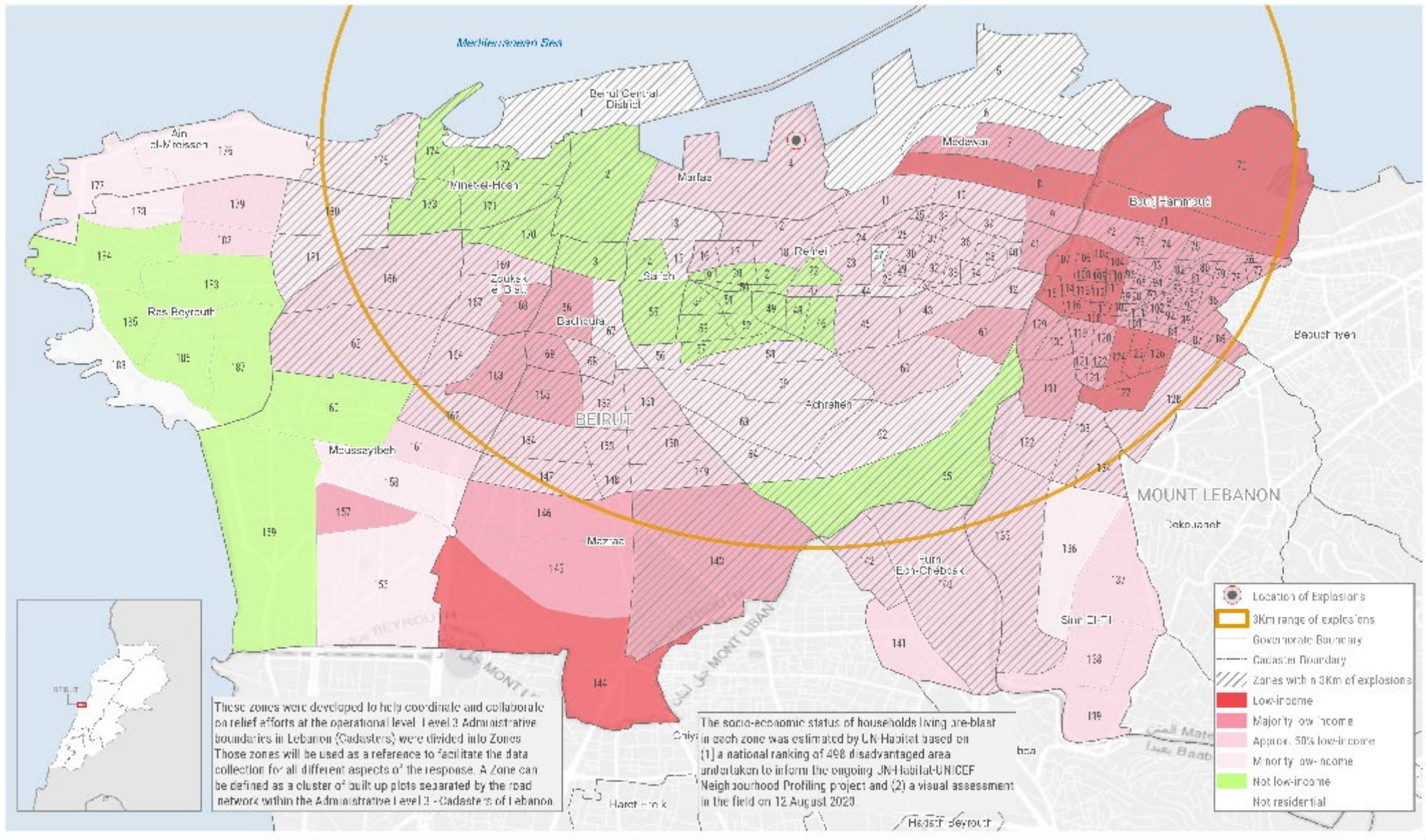
Damage impact analysis by ARIA team scientists at NASA JPL, Caltech, and Earth Observatory of Singapore. Located in Pasadena, California, Caltech manages JPL for NASA - Map produced by OCHA





# SOCIO-ECONOMIC VULNERABILITY

## UN-HABITAT ASSESSMENT













# POPULATION ESTIMATES

## HOUSEHOLD COMPOSITION

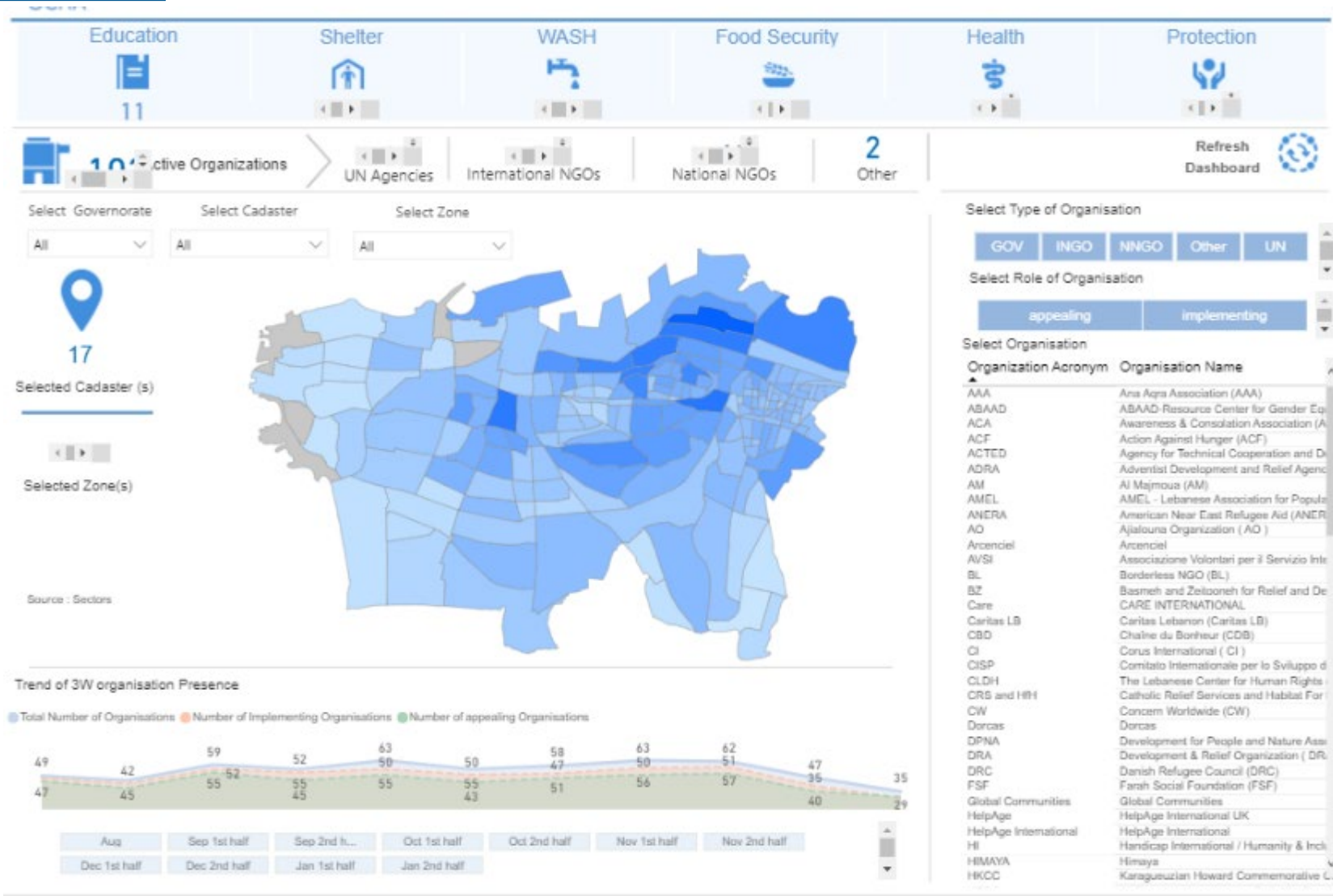
Breakdown of Households in Beirut and Mount Lebanon:

District	Beirut	Baabda	Matn	Average Mount Lebanon
Women	42%	39%	38%	38%
Men	35%	35%	36%	36%
Girls	12%	14%	13%	13%
Boys	11%	13%	13%	13%
Lebanese	69%	74%	77%	77%
Non-Lebanese	31%	26%	23%	23%
Average Household size	3.4	3.7	3.5	3.6

Source: Labour Force and Household Living Conditions Survey (LFHLCS) in Lebanon, 2018–2019

# RESPONSE OVERVIEW

## Partner presence map: Who is doing What and Where







# Thank You

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