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LITANI RIVER BASIN MANAGEMENT SUPPORT PROGRAM

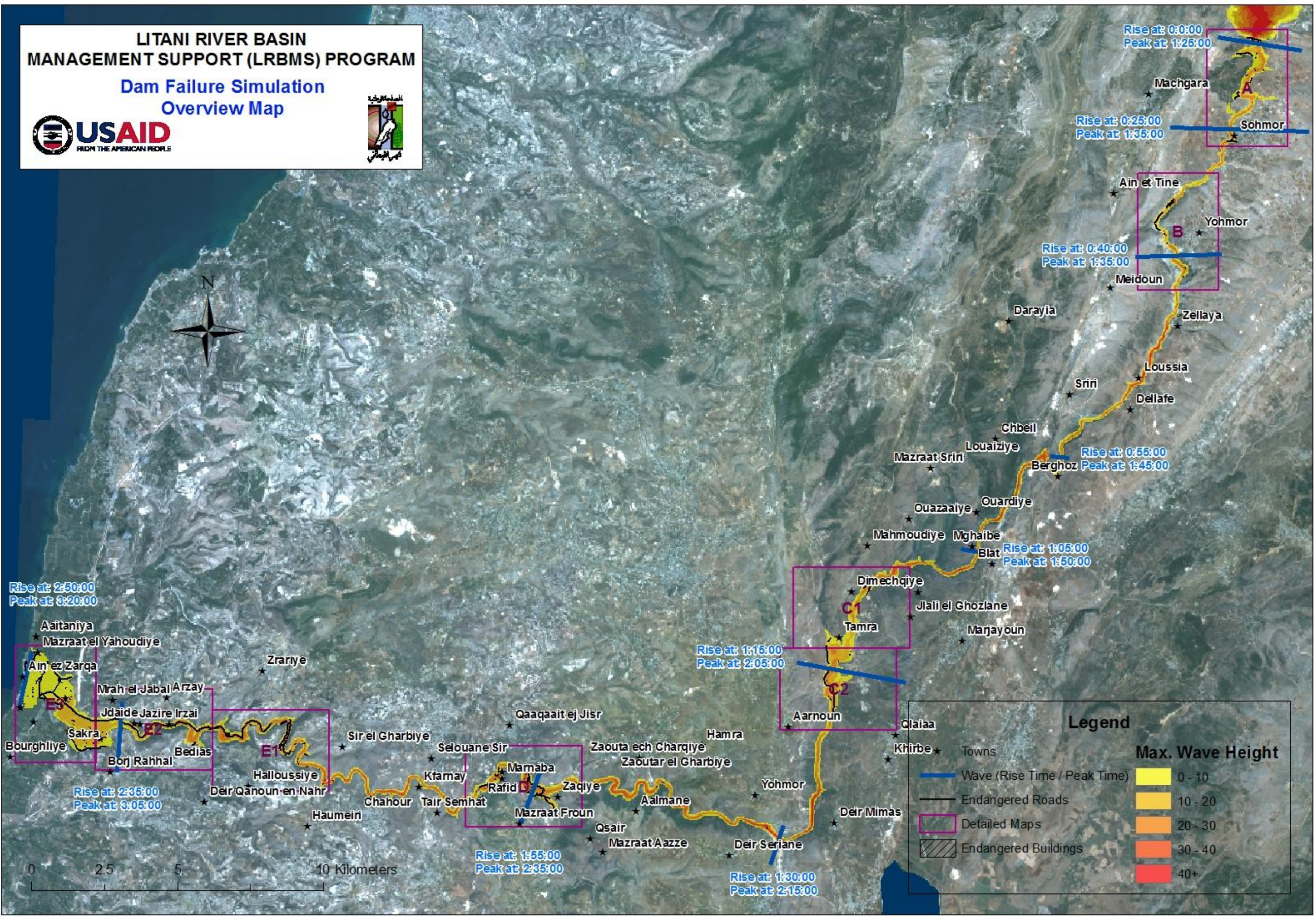
DAM BREAK MODELING FOR QARAOUN DAM
VOLUME 2 – MAPS

JANUARY 2012

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LITANI RIVER BASIN
MANAGEMENT SUPPORT (LRBMS) PROGRAM

Dam Failure Simulation
Overview Map



Legend

Max. Wave Height	
	0 - 10
	10 - 20
	20 - 30
	30 - 40
	40+

	Wave (Rise Time / Peak Time)
	Endangered Roads
	Detailed Maps
	Endangered Buildings
	Towns

Rise at: 2:50:00
Peak at: 3:20:00

Rise at: 2:35:00
Peak at: 3:05:00

Rise at: 1:55:00
Peak at: 2:35:00

Rise at: 1:15:00
Peak at: 2:05:00

Rise at: 1:30:00
Peak at: 2:15:00

Rise at: 0:40:00
Peak at: 1:35:00

Rise at: 0:25:00
Peak at: 1:35:00

Rise at: 0:00:00
Peak at: 1:25:00

Rise at: 0:55:00
Peak at: 1:45:00

Rise at: 1:05:00
Peak at: 1:50:00

LITANI RIVER BASIN
MANAGEMENT SUPPORT (LRBMS) PROGRAM

Dam Failure Simulation
Sheet A: Sohmor



Rise at: 0:0:00
Peak at: 1:25:00

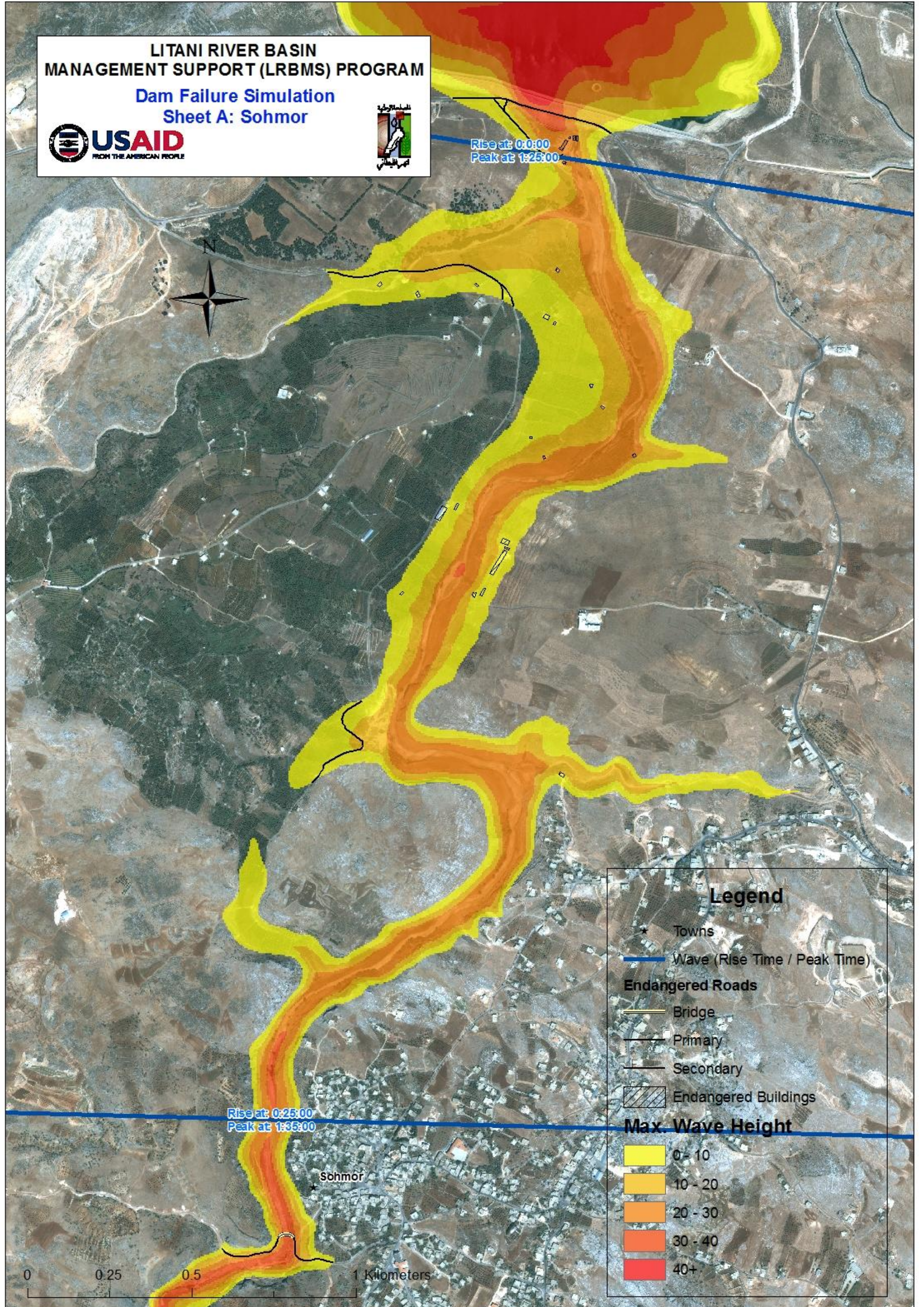


Legend

- ★ Towns
- Wave (Rise Time / Peak Time)
- Endangered Roads**
 - Bridge
 - Primary
 - Secondary
- ▨ Endangered Buildings
- Max. Wave Height**
 - 0 - 10
 - 10 - 20
 - 20 - 30
 - 30 - 40
 - 40+

Rise at: 0:25:00
Peak at: 1:35:00

Sohmor



LITANI RIVER BASIN
MANAGEMENT SUPPORT (LRBMS) PROGRAM

Dam Failure Simulation
Sheet B: Yohmor



Yohmor

Rise at: 0:40:00
Peak at: 1:35:00

Legend

- ★ Towns
- Wave (Rise Time / Peak Time)

Endangered Roads

- Bridge
- Primary
- Secondary
- ▨ Endangered Buildings

Max. Wave Height

- 0 - 10
- 10 - 20
- 20 - 30
- 30 - 40
- 40+

0 0.25 0.5 1 Kilometers

LITANI RIVER BASIN
MANAGEMENT SUPPORT (LRBMS) PROGRAM

Dam Failure Simulation
Sheet C1: Dimechqiye



Dimechqiye

Tamra

Legend

★ Towns	
— Wave (Rise Time / Peak Time)	
Endangered Roads	
— Bridge	
— Primary	
— Secondary	
▨ Endangered Buildings	

Max. Wave Height	
	0 - 10
	10 - 20
	20 - 30
	30 - 40
	40+

LITANI RIVER BASIN
MANAGEMENT SUPPORT (LRBMS) PROGRAM

Dam Failure Simulation
Sheet C2: Arnoun



Rise at 1:15:00
Peak at 2:05:00

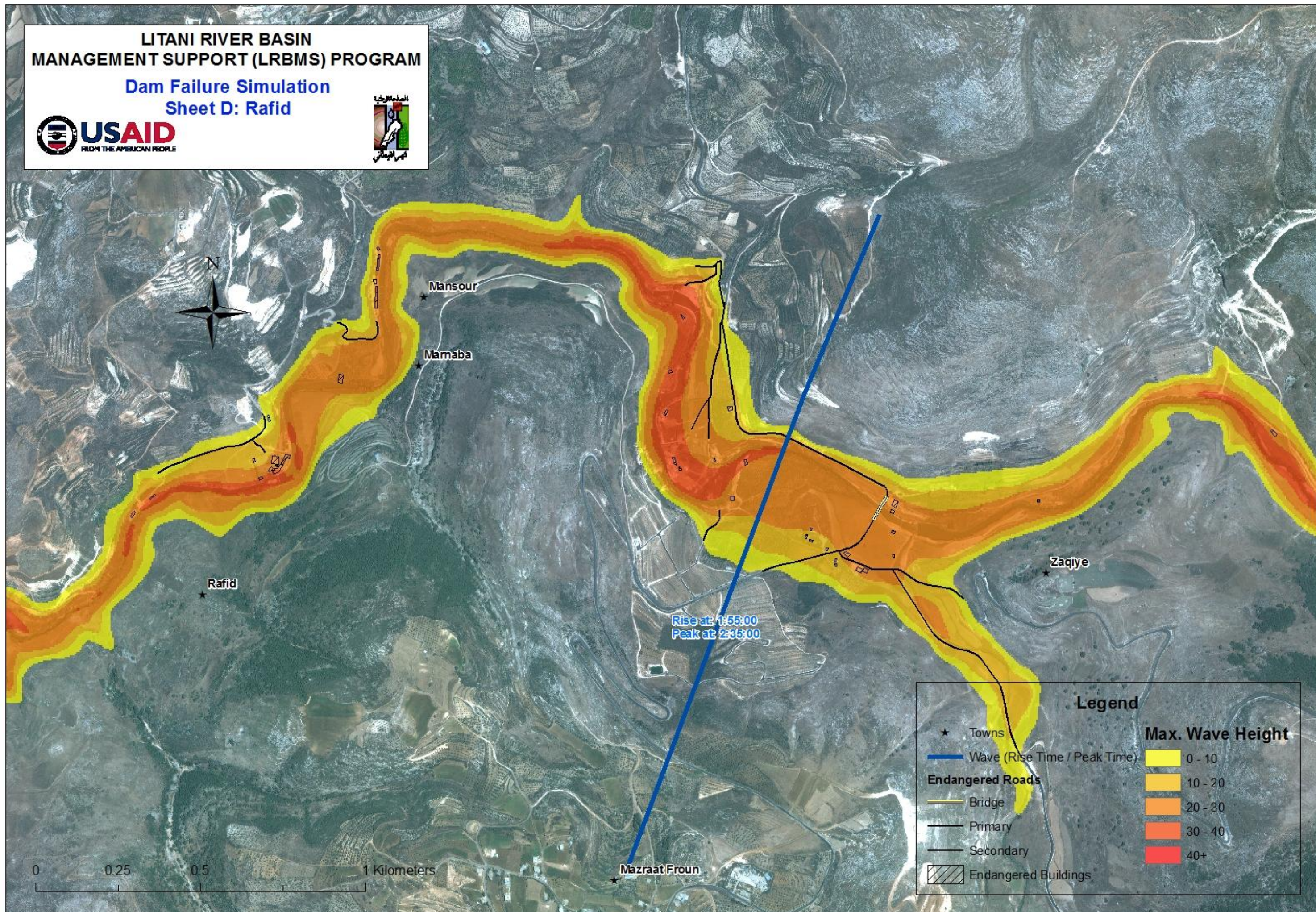
0 0.25 0.5 1 Kilometers
Arnoun

Legend

★ Towns	Max. Wave Height
— Wave (Rise Time / Peak Time)	0 - 10
Endangered Roads	10 - 20
— Bridge	20 - 30
— Primary	30 - 40
— Secondary	40+
▨ Endangered Buildings	

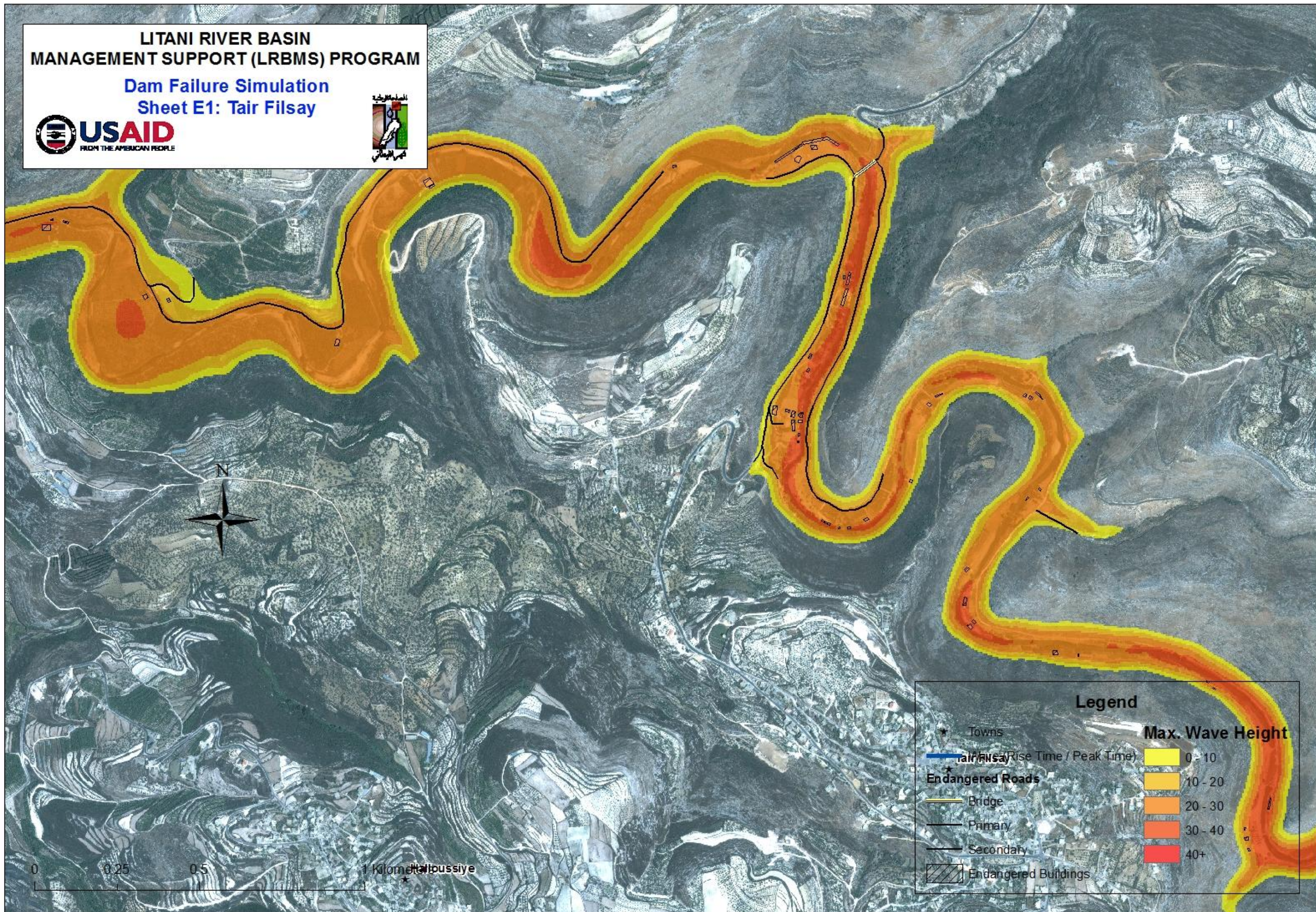
LITANI RIVER BASIN
MANAGEMENT SUPPORT (LRBMS) PROGRAM

Dam Failure Simulation
Sheet D: Rafid



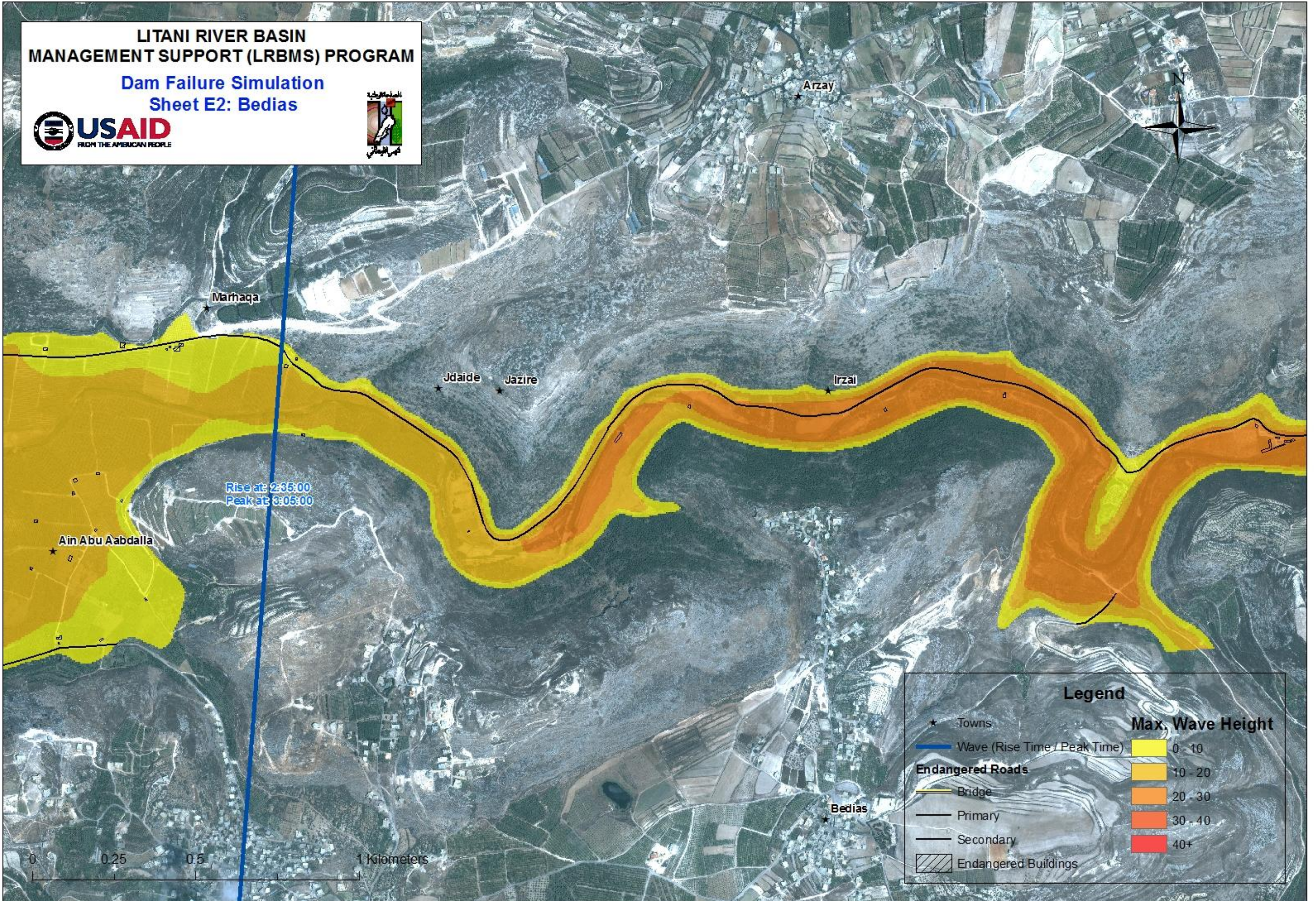
LITANI RIVER BASIN
MANAGEMENT SUPPORT (LRBMS) PROGRAM

Dam Failure Simulation
Sheet E1: Tair Filsay



LITANI RIVER BASIN
MANAGEMENT SUPPORT (LRBMS) PROGRAM

Dam Failure Simulation
Sheet E2: Bedias



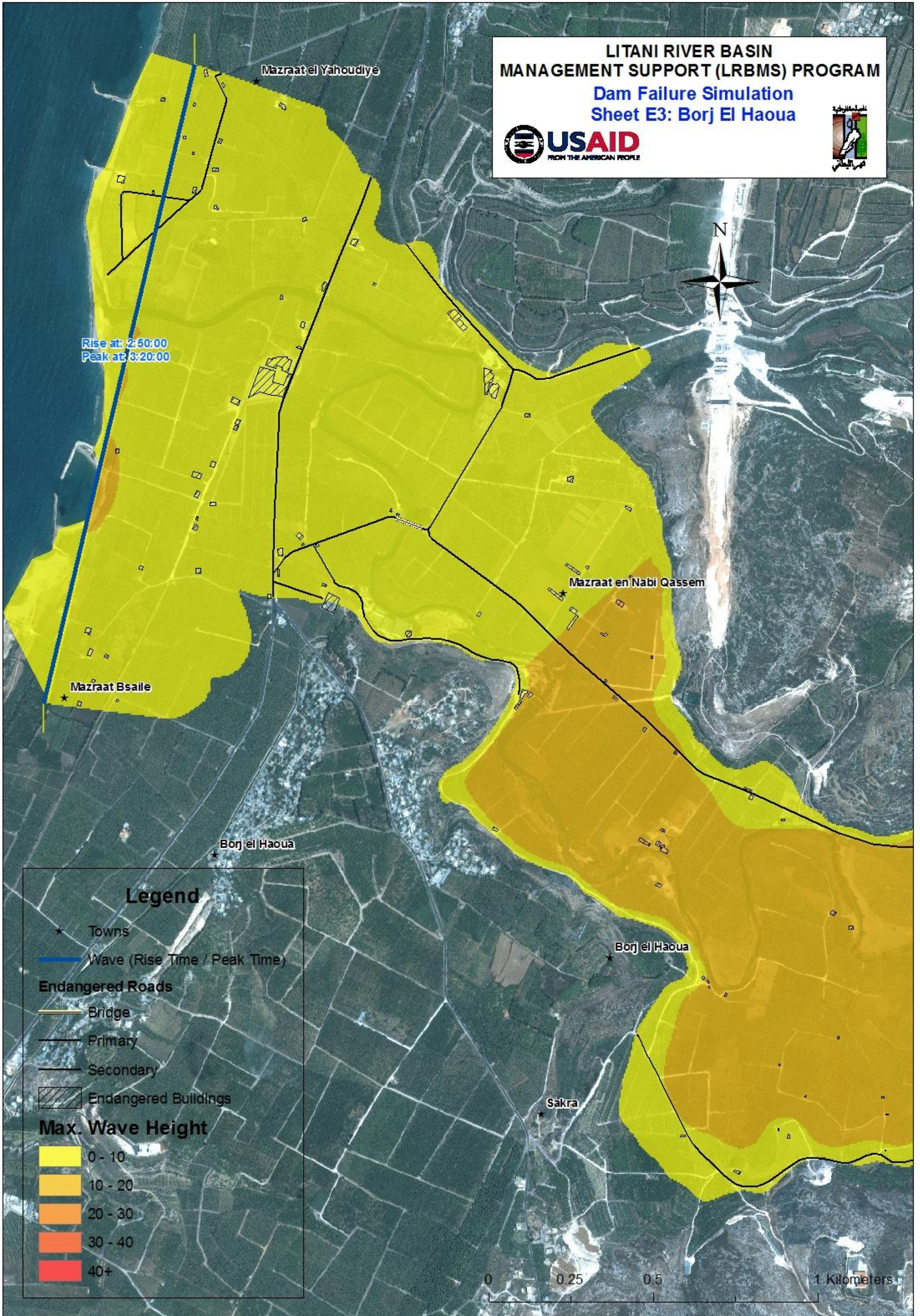
Rise at 2:35:00
Peak at 3:05:00

Legend

- ★ Towns
 - Wave (Rise Time / Peak Time)
 - Endangered Roads**
 - Bridge
 - Primary
 - Secondary
 - ▨ Endangered Buildings
- | Max. Wave Height |
|------------------|
| 0 - 10 |
| 10 - 20 |
| 20 - 30 |
| 30 - 40 |
| 40+ |

0 0.25 0.5 1 Kilometers

LITANI RIVER BASIN
 MANAGEMENT SUPPORT (LRBMS) PROGRAM
 Dam Failure Simulation
 Sheet E3: Borj El Haoua



Legend

- ★ Towns
- Wave (Rise Time / Peak Time)
- Endangered Roads**
- Bridge
- Primary
- Secondary
- ▨ Endangered Buildings
- Max. Wave Height**
- 0 - 10
- 10 - 20
- 20 - 30
- 30 - 40
- 40+

0 0.25 0.5 1 Kilometers

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