



المؤتمر الهندسي الاستشاري الثالث
"صناعة المستقبل لقطاع الاستشارات الهندسية"
الجلسة الحوارية: العدوان على غزة وإعادة الاعمار



أ. د. جلال الدبيك، مدير مركز التخطيط الحضري والحد من مخاطر الكوارث في جامعة النجاح الوطنية.
Prof. Dr. Jalal Al Dabbeek, Director of Urban Planning and Disaster Risk Reduction Center at An Najah National University

عمان – الاردن، 2024 / 8 / 21



تمسلس التخطيط لإدارة مخاطر الكوارث
"The Planning Sequence of Disaster Risk Management"



$$\text{Risk} = \text{Hazard} * \text{Vulnerability} * \text{Exposure}$$

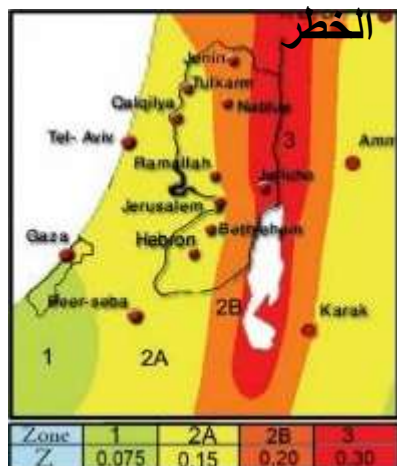
$$\text{المخاطر} = \text{الخطر} \times \text{قابلية التضرر} \times \text{التعرض}$$

$$[R] = [H] * [VUL] * [E]$$



Risk Assessment تقييم المخاطر

Hazard



Vulnerability قابلية التضرر



Exposure التعرض



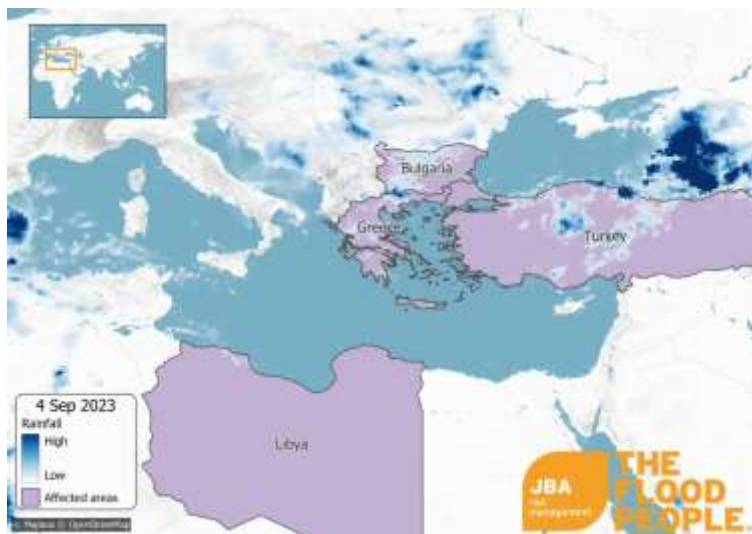
Can the risk be = zero?

هل يمكن ان تكون المخاطر = صفر؟

SEISMIC RISK المخاطر الزلزالية

$$\text{Risk} = \text{Hazard} * \text{Vulnerability} * \text{Exposure}$$

$$\text{المخاطر} = \text{الخطر} \times \text{قابلية التضرر} \times \text{التعرض}$$



المخاطر = الخطر x قابلية التضرر x التعرض

Risk = Hazard * Vulnerability * Exposure



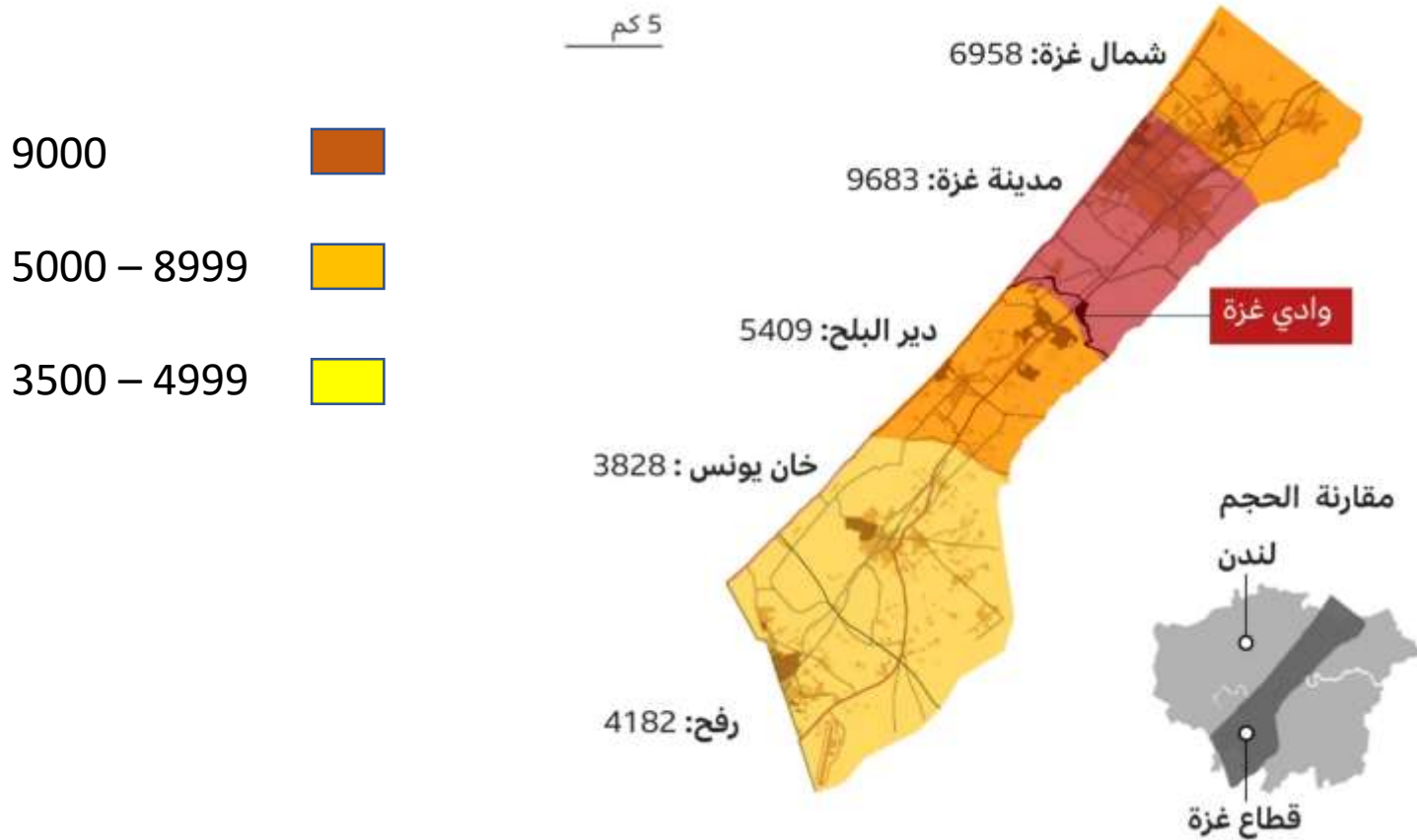
28/10/2024

Jalal and Jamal Al Dabbeek, UPDRRC -ANNU, Palestine

عدوان دولة الاحتلال على قطاع غزة

الكثافة السكانية:

عدد السكان في الكيلومتر مربع





عدوان دولة الاحتلال على قطاع غزة

Hazard x Vulnerability x Exposure = Risk

High / very high Hazards



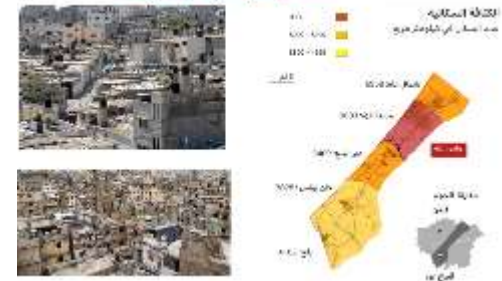
X

High / Very High Vulnerability



X

High / Very High Exposure







مقارنات بين قطاع غزة وكرانيا



$$\frac{2200000}{360} = 6100 - 6300 \text{ Pers / Km}^2$$

قطاع غزة:

$$\frac{40000000}{606000} = 66 \text{ Pers / Km}^2$$

اوكرانيا:

$$6285 / 66 = 95 \text{ مرة}$$

نسبة قابلية التعرض:

$$606000 / 360 = 1690$$

النسبة بين المساحات



تحديد درجة الضرر: تصنيف الاضرار والانهيارات لجميع القطاعات



28/10/2024

Jalal and Jamal Al Dabbeek, UPDRRC -ANNU,
Palestine

درجات الاضرار والأنهيارات وفقاً للمقياس الأوروبي EMS-98



Grade 1

Negligible to slight damage
(no structural damage)



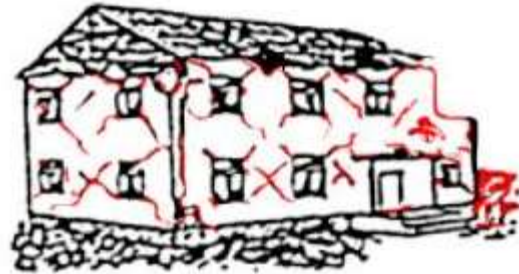
Grade 2

Moderate damage
(slight structural damage, moderate non-structural damage)



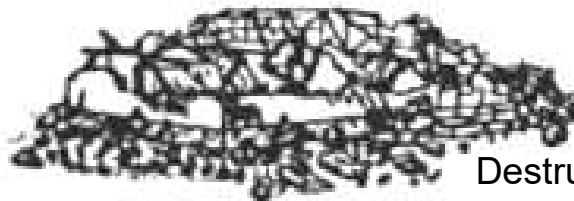
Grade 3

Substantial to heavy damage
(moderate structural damage,
heavy non-structural damage)



Grade 4

Very Heavy damage
(heavy structural damage,
very heavy non-structural damage)



Grade 5

Destruction (very heavy structural damage)



Classification of Damage

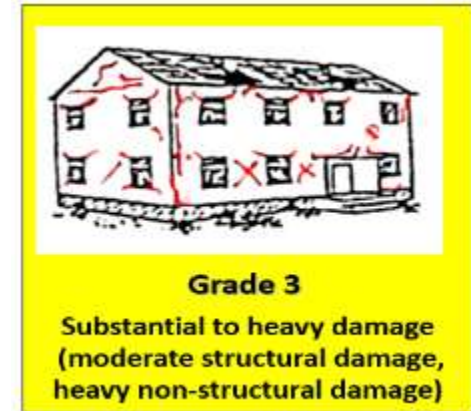
تصنيف الاضرار



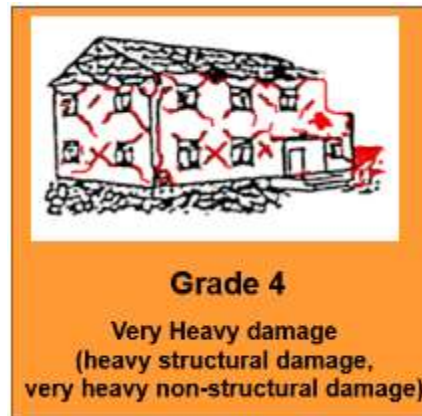
ضرر ضئيل الى طفيف



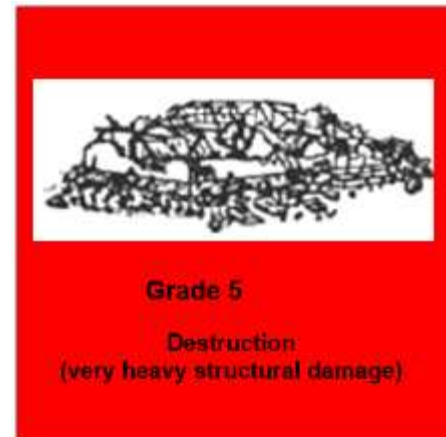
ضرر معتدل / متوسط



اضرار جوهريه الى فادحة
شديدة



أضرار جسيمة / فادحة جدا

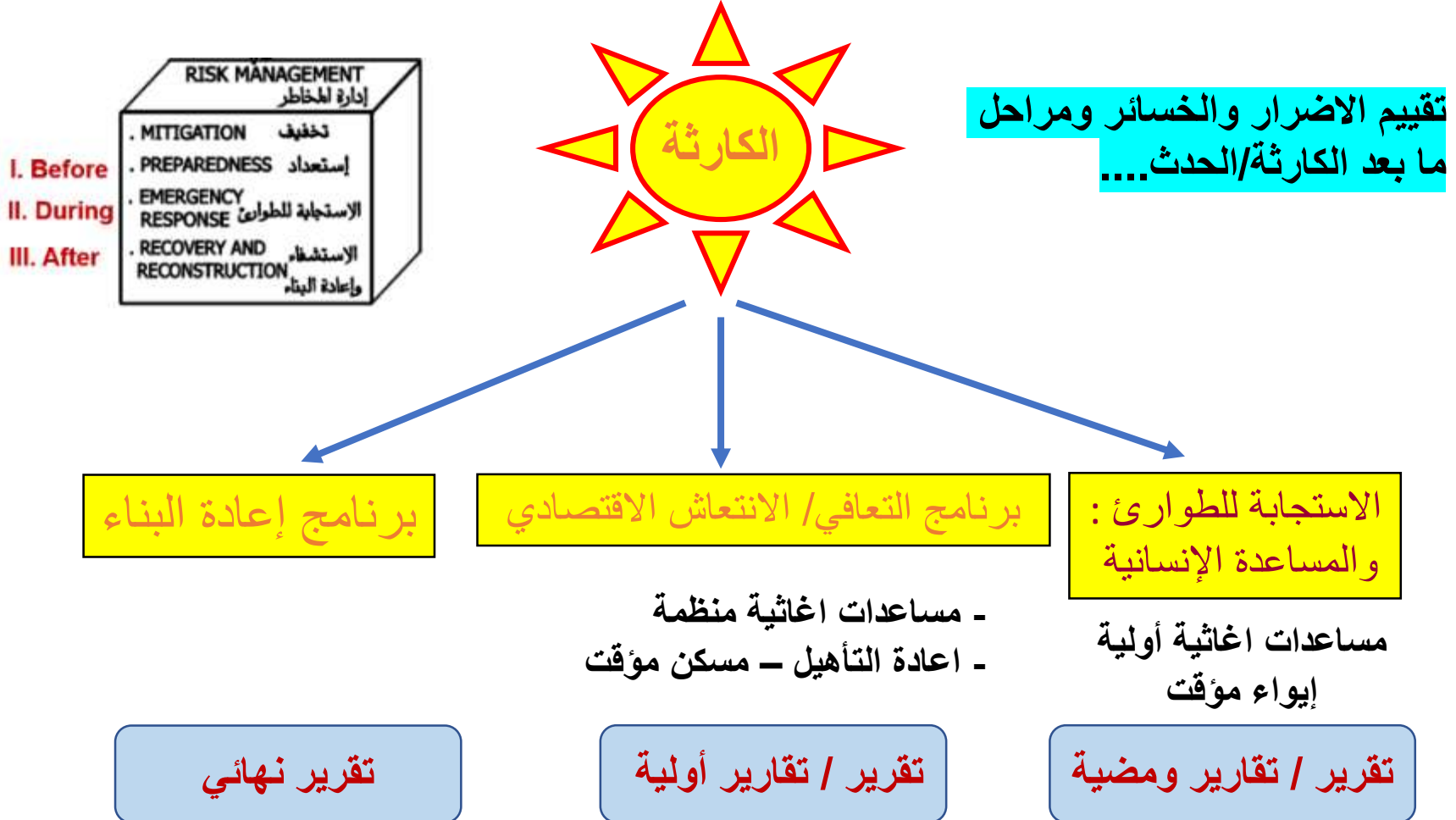


تدمير / هدم

Post-Disaster Stages

مراحل ما بعد الكارثة/الحدث

تنويه: قد تكون بداية هذه المراحل مرور دقائق او ساعات بعد حصول الكارثة/الحدث





اعمال حربية عدوانية



تحت تأثير الزلازل



Grade 5



من اثار عدوان دولة الاحتلال على
قطاع غزة



تحت تأثير الزلازل

Grade 4



Grade 5

من اثار عدوان دولة الاحتلال على
قطاع غزة



من اثار عدوان دولة الاحتلال على
قطاع غزة

Grade 3 – 4

Grade 4



من اثار عدوان دولة الاحتلال على قطاع غزة



Grade 5





اسقاط الاضرار وفقا لدرجة تصنيفها على الخرائط



التقييم السريع للأضرار، يتم من خلال:

- فرق هندسية متخصصة وهو تقييم قطاعي.
- الاضرار من الدرجة الخامسة والرابعة يمكن تقييمها من خلال الصور الجوية.



وضع لافتات على المباني Placarding Building

INSPECTED	RESTRICTED USE	UNSAFE
NO RESTRICTIONS ON USE OR OCCUPANCY This structure has been inspected (as indicated below) and no apparent structural hazard has been found. Report any unsafe conditions to local authorities; reinspection may be required. ☐ Exterior Only ☐ Exterior and Interior Facility Name and Address: _____ _____ _____ Date: _____ Time: _____ This facility was inspected under emergency conditions for: _____ (Jurisdiction) on the date and time noted. Inspector ID/Agency: _____ _____ _____ Do Not Remove This Placard until Authorized by Governing Authority.	RESTRICTED USE Caution: This structure has been inspected and found to be damaged as described below: _____ _____ _____ Date: _____ Time: _____ (Caution: Aftershocks since inspection may increase damage and risk.) This facility was inspected under emergency conditions for: _____ (Jurisdiction) Inspector ID / Agency: _____ _____ _____ Entry, occupancy, and lawful use are restricted as indicated below: ☐ Do not enter the following areas: _____ ☐ Restrict entry allowed for access to contents ☐ Other restrictions: _____ Facility name and address: _____ _____ _____ Do Not Remove, Alter, or Cover this Placard until Authorized by Governing Authority.	UNSAFE DO NOT ENTER OR OCCUPY Warning: This structure has been seriously damaged and is unsafe. Do not enter. Entry may result in death or injury. Comments: _____ _____ _____ Date: _____ Time: _____ This facility was inspected under emergency conditions for: _____ (Jurisdiction) on the date and time noted. Facility Name and Address: _____ _____ _____ Inspector ID/Agency: _____ _____ _____ Do Not Remove This Placard until Authorized by Governing Authority.

Figure 3: Traffic Light System for Placarding Buildings (DUDBC, 2009)

INSPECTED
NO RESTRICTIONS ON USE OR OCCUPANCY This structure has been inspected (as indicated below) and no apparent structural hazard has been found. Report any unsafe conditions to local authorities; reinspection may be required. ☐ Exterior Only ☐ Exterior and Interior Facility Name and Address: _____ _____ _____ Date: _____ Time: _____ This facility was inspected under emergency conditions for: _____ (Jurisdiction) on the date and time noted. Inspector ID/Agency: _____ _____ _____ Do Not Remove This Placard until Authorized by Governing Authority.



Post-disaster Building Safety Evaluation Guidance

Report on the Current State of Practice, including Recommendations Related to Structural and Nonstructural Safety and Habitability

FEMA P-2055 / November 2019



Create an account

KoBoToolbox

KoBoToolbox is an integrated set of tools for building forms and collecting interview responses. It is built by the Harvard Humanitarian Initiative for easy and reliable use in difficult field settings, such as humanitarian emergencies or post-conflict environments.

This instance of KoBoToolbox is hosted and supported by UN OCHA and can be used without limitations by any humanitarian organization. Please sign up with your organization's email address.

If you are not working for a humanitarian organization, please instead sign up at the instance hosted by the Harvard Humanitarian Initiative.

You can also download and install KoBoToolbox on your own server or on your own computer.

[Terms of Service](#) | [Privacy Policy](#)

Name Organization name

Username

E-mail

Sector Country

Gender
☐ Male ☐ Female ☐ Other

Password

Password strength

Use a few words, avoid common phrases
No need for symbols, digits, or uppercase letters

Password confirmation

Enter the same password as before, for verification

Create Account

or login





نموذج تقييم أضرار البثايلت والجدران

[illegible]



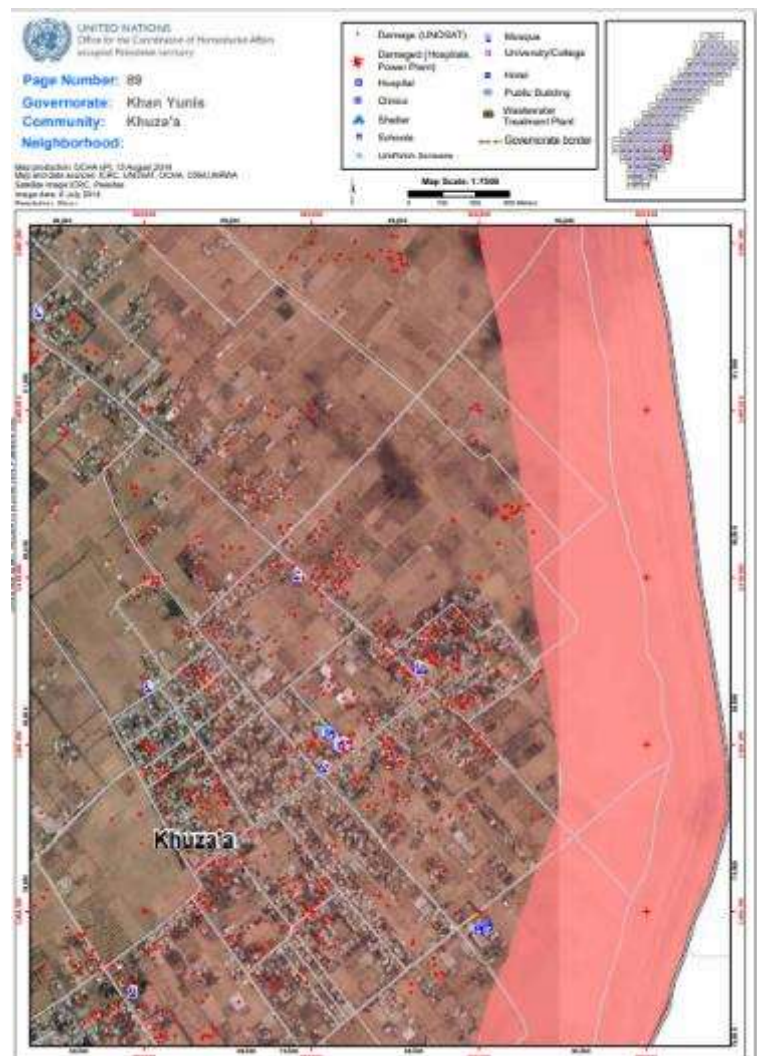
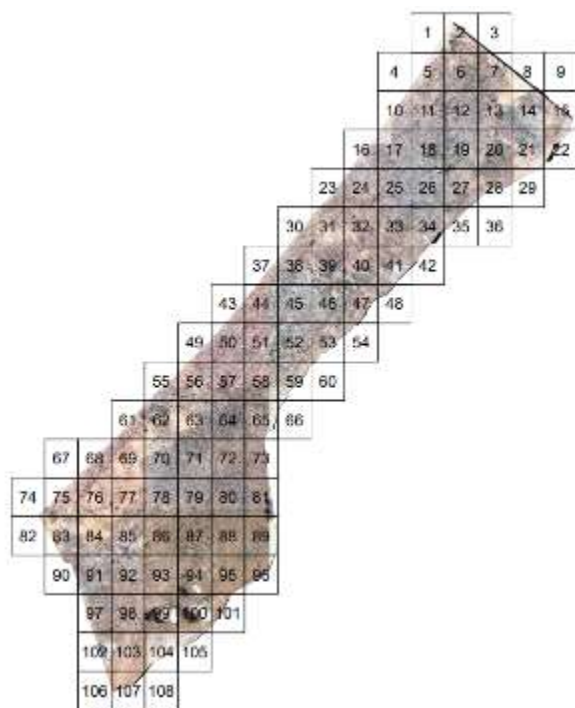
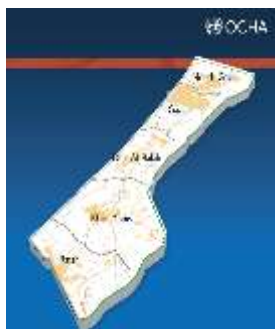
تقييم الاضرار من خلال استخدام الصور الجوية



الاضرار من الدرجة
الخامسة والرابعة
يمكن تقييمها من خلال
الصور الجوية.



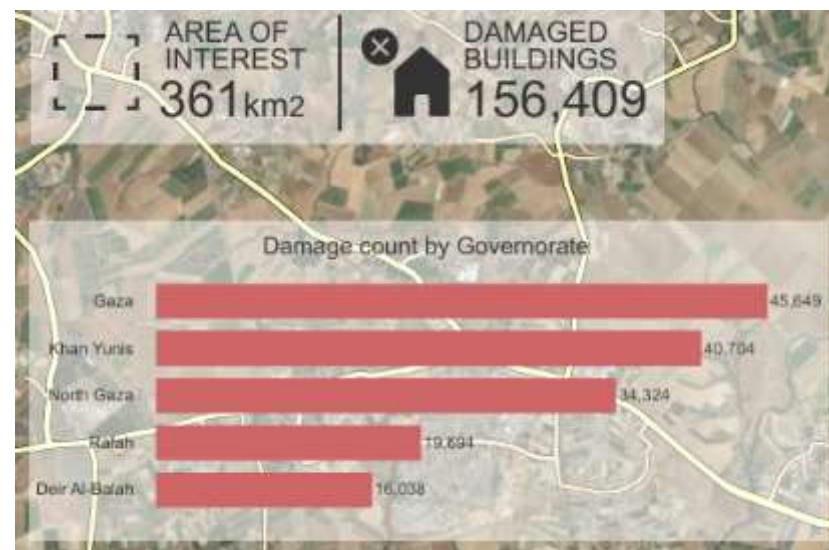
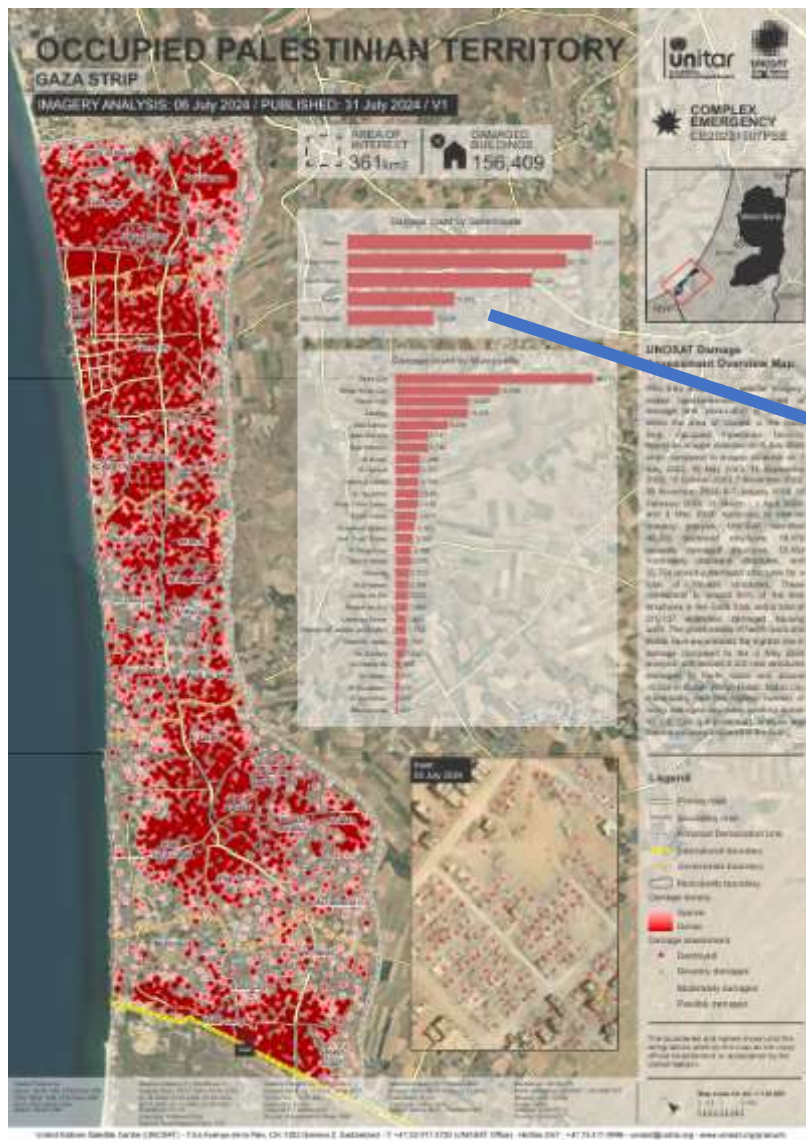
عدوان/حرب دولة الاحتلال على قطاع غزة 2014





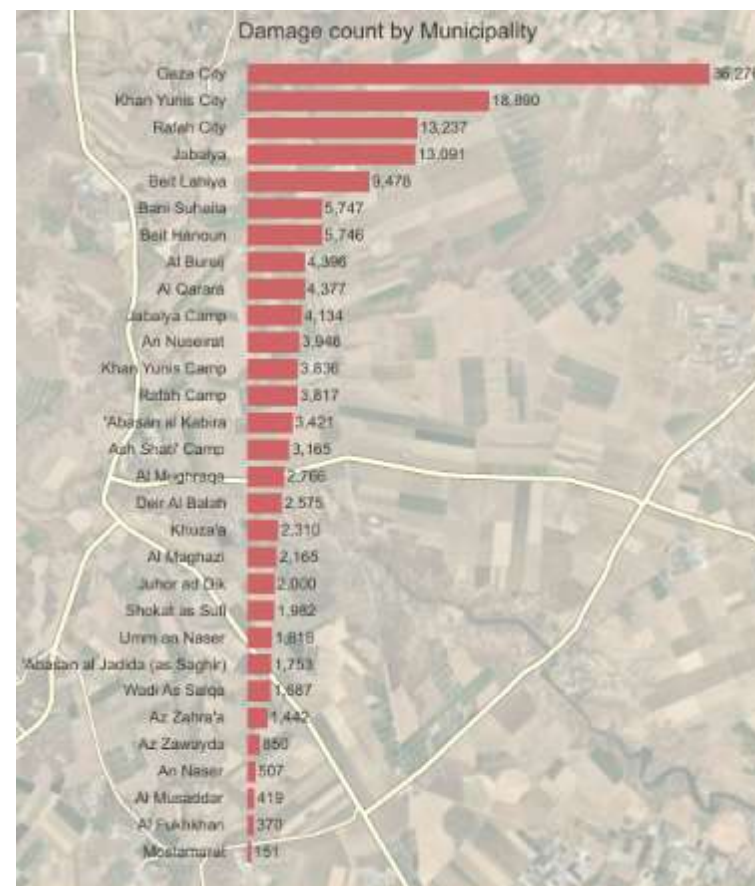
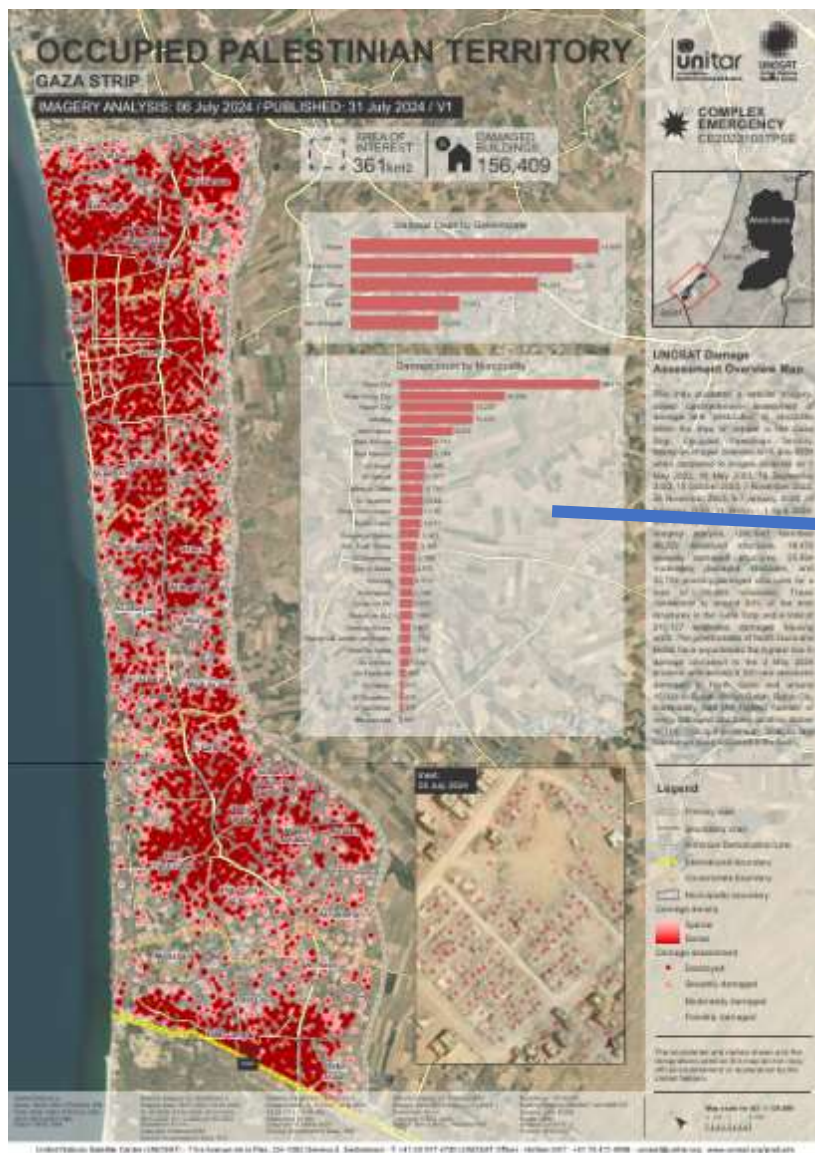


تقرير اممي - 2024-7-31





تقرير اممي - 2024-7-31





OCCUPIED PALESTINIAN TERRITORY GAZA STRIP

IMAGERY ANALYSIS, 06 July 2024 / PUBLISHED: 31 July 2024 / V1

AREA OF INTEREST
361 km²

DAMAGED BUILDINGS
156,409

Damage by Municipality

Municipality	Damaged Buildings
Beit Hanoun	14,000
Beit Lathmar	13,500
Beit Dajan	12,500
Beit Hanoun	11,500
Beit Lathmar	10,500
Beit Dajan	9,500
Beit Hanoun	8,500
Beit Lathmar	7,500
Beit Dajan	6,500
Beit Hanoun	5,500
Beit Lathmar	4,500
Beit Dajan	3,500
Beit Hanoun	2,500
Beit Lathmar	1,500
Beit Dajan	1,000
Beit Hanoun	500
Beit Lathmar	200
Beit Dajan	100

UNISAT Damage Assessment Overview Map

This map displays a satellite imagery analysis of the Gaza Strip, showing the extent of damage to buildings and infrastructure. The map is color-coded to indicate the severity of damage, with red representing the most severe damage and yellow representing less severe damage. The map also shows the location of the Gaza Strip within the context of the surrounding region, including the Mediterranean Sea and the Gaza Strip's borders with Egypt and Israel.

Legend

- Area of Interest
- Damaged Buildings
- Damage by Municipality
- Damage by Severity
- Damage by Type
- Damage by Material
- Damage by Location
- Damage by Date
- Damage by Status
- Damage by Owner
- Damage by Use
- Damage by Value
- Damage by Risk
- Damage by Impact
- Damage by Duration
- Damage by Frequency
- Damage by Intensity
- Damage by Extent
- Damage by Scope
- Damage by Scale
- Damage by Level
- Damage by Grade
- Damage by Class
- Damage by Category
- Damage by Group
- Damage by Family
- Damage by Series
- Damage by Set
- Damage by Collection
- Damage by System
- Damage by Network
- Damage by Framework
- Damage by Structure
- Damage by Organization
- Damage by Institution
- Damage by Association
- Damage by Union
- Damage by Partnership
- Damage by Collaboration
- Damage by Joint Venture
- Damage by Consortium
- Damage by Alliance
- Damage by Coalition
- Damage by Federation
- Damage by Confederation
- Damage by League
- Damage by Council
- Damage by Committee
- Damage by Commission
- Damage by Authority
- Damage by Agency
- Damage by Department
- Damage by Division
- Damage by Office
- Damage by Unit
- Damage by Section
- Damage by Branch
- Damage by Division
- Damage by Department
- Damage by Agency
- Damage by Authority
- Damage by Commission
- Damage by Council
- Damage by Committee
- Damage by Conference
- Damage by Convention
- Damage by Congress
- Damage by Summit
- Damage by Assembly
- Damage by Gathering
- Damage by Meeting
- Damage by Session
- Damage by Event
- Damage by Occasion
- Damage by Celebration
- Damage by Festival
- Damage by Fair
- Damage by Show
- Damage by Exhibition
- Damage by Display
- Damage by Presentation
- Damage by Performance
- Damage by Production
- Damage by Project
- Damage by Program
- Damage by Plan
- Damage by Policy
- Damage by Principle
- Damage by Practice
- Damage by Procedure
- Damage by Process
- Damage by Protocol
- Damage by Program
- Damage by Project
- Damage by Plan
- Damage by Policy
- Damage by Principle
- Damage by Practice
- Damage by Procedure
- Damage by Process
- Damage by Protocol

Scale: 1:400,000

Map Author: UNISAT

Map Date: 06 July 2024

Map Version: 1.0

Map License: UNISAT

Map Contact: UNISAT

Map Feedback: UNISAT

Map Disclaimer: UNISAT

Map Acknowledgment: UNISAT

Map Copyright: UNISAT

Map Trademark: UNISAT

Map Patent: UNISAT

Map Invention: UNISAT

Map Design: UNISAT

Map Development: UNISAT

Map Production: UNISAT

Map Distribution: UNISAT

Map Circulation: UNISAT

Map Availability: UNISAT

Map Accessibility: UNISAT

Map Usability: UNISAT

Map Reliability: UNISAT

Map Validity: UNISAT

Map Accuracy: UNISAT

Map Precision: UNISAT

Map Detail: UNISAT

Map Clarity: UNISAT

Map Readability: UNISAT

Map Comprehensibility: UNISAT

Map Understandability: UNISAT

Map Interpretability: UNISAT

Map Translatability: UNISAT

Map Adaptability: UNISAT

Map Flexibility: UNISAT

Map Versatility: UNISAT

Map Multifunctionality: UNISAT

Map Multipurpose: UNISAT

Map Multi-use: UNISAT

Map Multi-functional: UNISAT

Map Multi-purpose: UNISAT

Map Multi-useful: UNISAT

Map Multi-valuable: UNISAT

Map Multi-beneficial: UNISAT

Map Multi-advantageous: UNISAT

Map Multi-favorable: UNISAT

Map Multi-positive: UNISAT

Map Multi-constructive: UNISAT

Map Multi-productive: UNISAT

Map Multi-generative: UNISAT

Map Multi-creative: UNISAT

Map Multi-innovative: UNISAT

Map Multi-imaginative: UNISAT

Map Multi-artistic: UNISAT

Map Multi-aesthetic: UNISAT

Map Multi-beautiful: UNISAT

Map Multi-attractive: UNISAT

Map Multi-appealing: UNISAT

Map Multi-appealing: UNISAT

Map Multi-attractive: UNISAT

Map Multi-beautiful: UNISAT

Map Multi-artistic: UNISAT

Map Multi-imaginative: UNISAT

Map Multi-innovative: UNISAT

Map Multi-creative: UNISAT

Map Multi-generative: UNISAT

Map Multi-productive: UNISAT

Map Multi-useful: UNISAT

Map Multi-valuable: UNISAT

Map Multi-beneficial: UNISAT

Map Multi-advantageous: UNISAT

Map Multi-favorable: UNISAT

Map Multi-positive: UNISAT

Map Multi-constructive: UNISAT

Map Multi-productive: UNISAT

Map Multi-generative: UNISAT

Map Multi-creative: UNISAT

Map Multi-imaginative: UNISAT

Map Multi-innovative: UNISAT

Map Multi-artistic: UNISAT

Map Multi-aesthetic: UNISAT

Map Multi-beautiful: UNISAT

Map Multi-attractive: UNISAT

Map Multi-appealing: UNISAT

Map Multi-appealing: UNISAT

Map Multi-attractive: UNISAT

Map Multi-beautiful: UNISAT

Map Multi-artistic: UNISAT

Map Multi-imaginative: UNISAT

Map Multi-innovative: UNISAT

Map Multi-creative: UNISAT

Map Multi-generative: UNISAT

Map Multi-productive: UNISAT

Map Multi-useful: UNISAT

Map Multi-valuable: UNISAT

Map Multi-beneficial: UNISAT

Map Multi-advantageous: UNISAT

Map Multi-favorable: UNISAT

Map Multi-positive: UNISAT

Map Multi-constructive: UNISAT

Map Multi-productive: UNISAT

Map Multi-generative: UNISAT

Map Multi-creative: UNISAT

Map Multi-imaginative: UNISAT

Map Multi-innovative: UNISAT

Map Multi-artistic: UNISAT

Map Multi-aesthetic: UNISAT

Map Multi-beautiful: UNISAT

Map Multi-attractive: UNISAT

Map Multi-appealing: UNISAT

Map Multi-appealing: UNISAT

Map Multi-attractive: UNISAT

Map Multi-beautiful: UNISAT

Map Multi-artistic: UNISAT

Map Multi-imaginative: UNISAT

Map Multi-innovative: UNISAT

Map Multi-creative: UNISAT

Map Multi-generative: UNISAT

Map Multi-productive: UNISAT

Map Multi-useful: UNISAT

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Map Multi-beneficial: UNISAT

Map Multi-advantageous: UNISAT

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Map Multi-imaginative: UNISAT

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Map Multi-artistic: UNISAT

Map Multi-aesthetic: UN

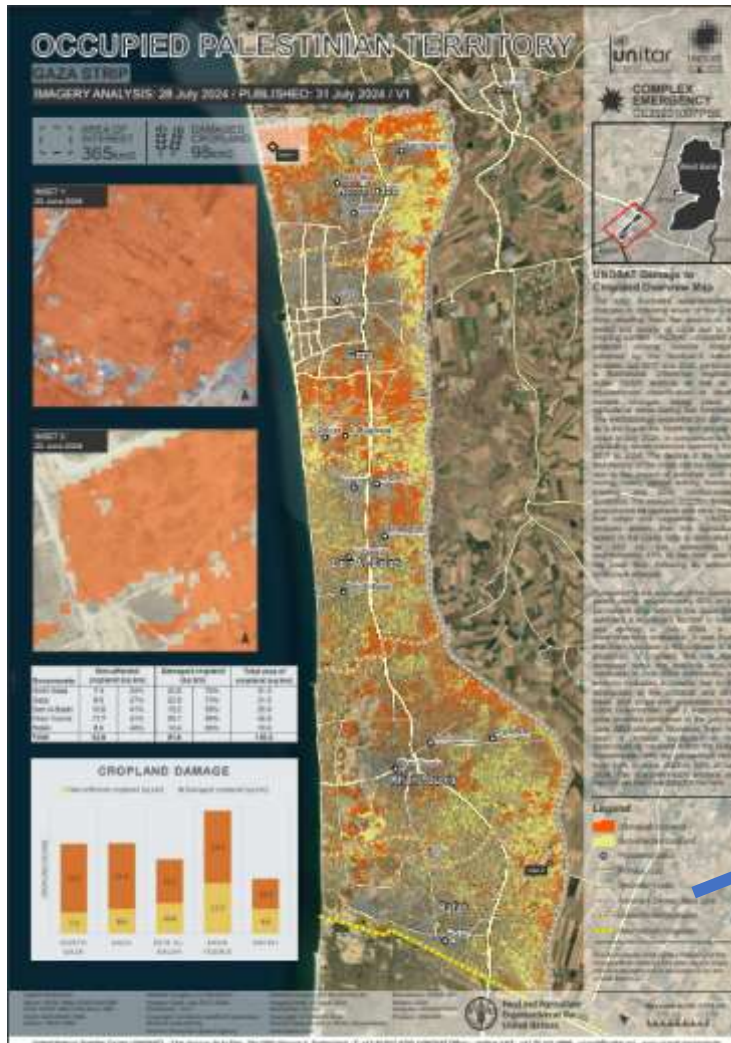
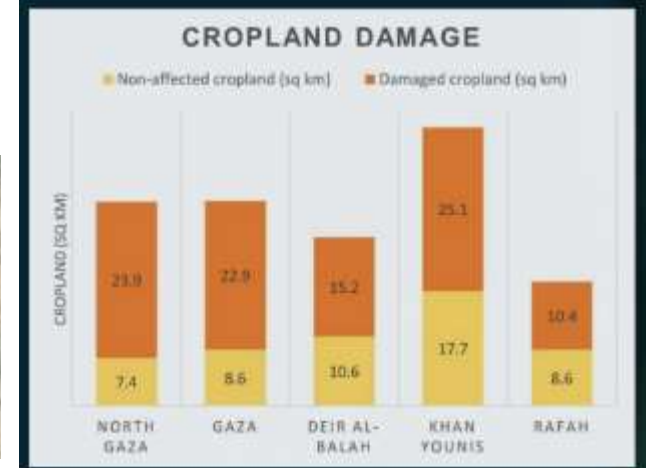




مجموع مساحة الأراضي الزراعية: 150.5 km²

AREA OF INTEREST 365km ²	DAMAGED CROPLAND 98km ²
--	---------------------------------------

Governorate	Non-affected cropland (sq km)		Damaged cropland (sq km)		Total area of cropland (sq km)
North Gaza	7.4	24%	23.9	76%	31.3
Gaza	8.6	27%	22.9	73%	31.6
Deir Al-Balah	10.6	41%	15.2	59%	25.9
Khan Younis	17.7	41%	25.1	59%	42.8
Rafah	8.6	45%	10.4	55%	19.0
Total	52.9		97.6		150.5



Jalal and Jamal Al Dabbeek, UPDRRC -ANNU, Palestine



مقارنة الخسائر في الأرواح في حالة تضرر وانهارات المباني بسبب الزلازل او الحروب (المقارنة لنفس درجة الضرر):

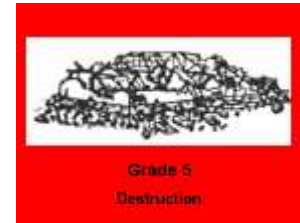




Grade 5



مقارنة بين الانهيارات بنفس
الدرجة: زلازل واعمال حربية



Grade 5





مقارنة بين الانهيارات بنفس الدرجة: زلازل واعمال حربية





Grade 3:



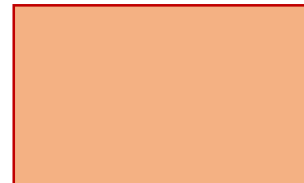
Jalal and Jamal Al Dabbeek, UPDRRC -ANNU,
Palestine



Grade 4



Grade 5



Grade 3



ماذا عن خطوط الخدمات ومحيط
المبنى الذي تعرض للقصف؟

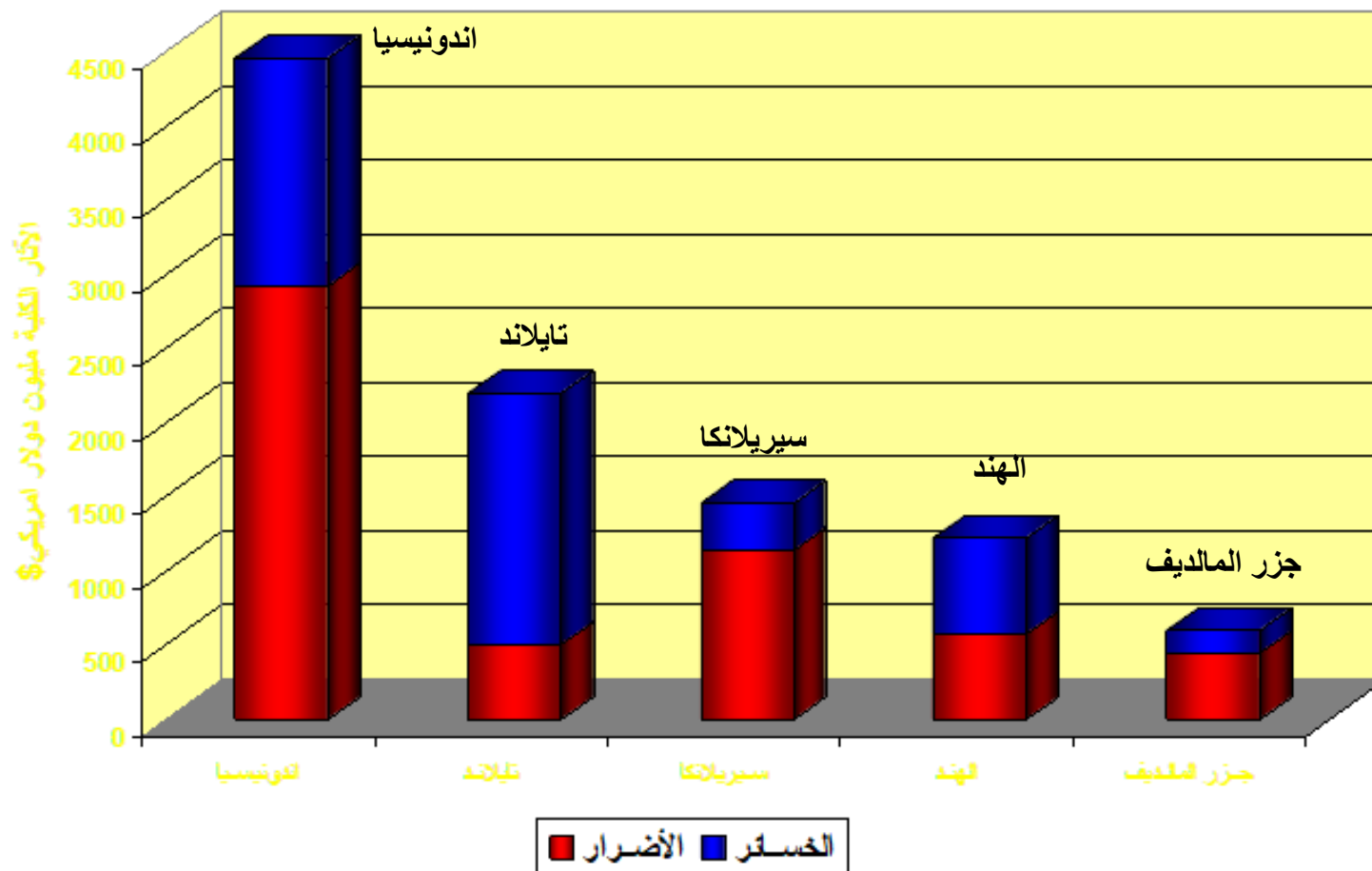


WB



2004 Indian Ocean Tsunami أمواج تسونامي في المحيط الهندي 2004

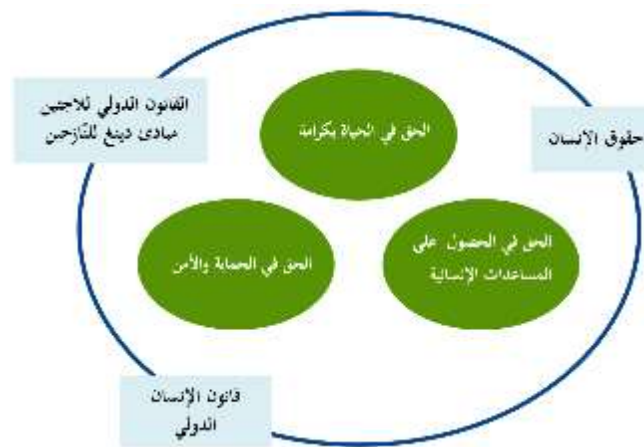
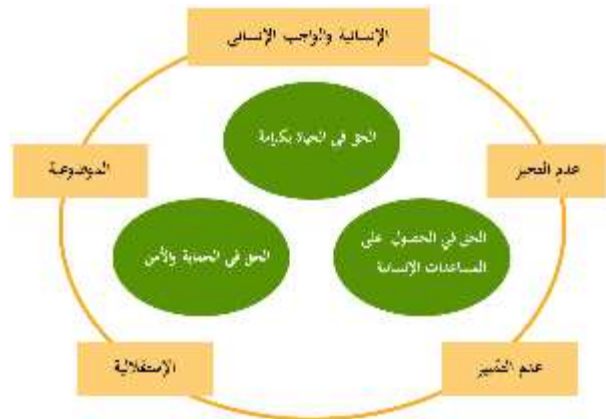
توزيع الآثار حسب الدولة Distribution of Effects by Country





الإغاثة المنتظمة والمسكن المؤقت

دليل سفير: الميثاق الإنساني والمعايير الدنيا في الاستجابة الإنسانية





ما هو اسفير؟



الصحة



المأوى
والمستوطنات
البشرية



الأمن الغذائي
والتغذية



الامداد بالماء
والإصحاح
والنهوض بالنظافة



اختيار الموقع وتخطيطه . . بعض الملاحظات الإرشادية

يوفر الموقع 45 م 2 للشخص الواحد (وهذا يشمل طرق البنية التحتية ، والصرف الصحي ، والمدارس ، والمكاتب ، وأنظمة المياه ، والأمن ، وحواجز الحرائق ، والأسواق ، والمخازن ، والمرافق ، وموقع المأوى) ، ولكنه يستثني الأراضي المخصصة للزراعة (المحاصيل والماشية)

- «لا ينبغي أن تتجاوز درجة انحدار الموقع 6 في المائة، إلا إذا اتخذت تدابير مهمة لصرف المياه ومكافحة عوامل التعرية كما لا ينبغي أن تقل درجة انحدارها عن 1 في المائة لتسهيل الصرف»
- (راجع صفحة 246 من دليل اسفير – طبعة 2011)

انحدار الموقع:

لا يقل عن 1% ولا يزيد عن 6%

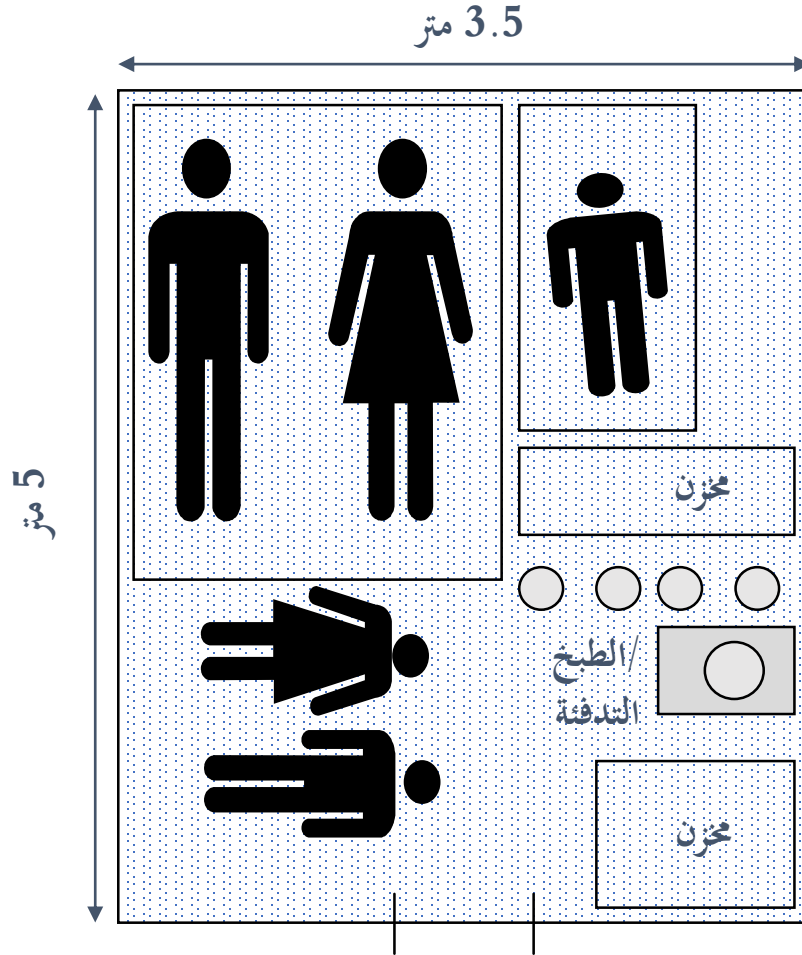




الوحدات السّكنيّة-المخطط العام

- المأوى (Shelter) = 1 عائلة $\approx$ 5-6 أفراد
- المجموعة (Community) = 16 مأوى $\approx$ 80 فرد
- المجمع (Block) = 16 مجموعة $\approx$ 1250 فرد
- القطاع (Sector) = 4 مجتمعات / بلوك $\approx$ 5000 فرد
- المخيم (Camp) = 4 قطاعات $\approx$ 20000 فرد

مساحة الأرض المطلوبة للمخيم: 800 – 900 دونم تقريبا



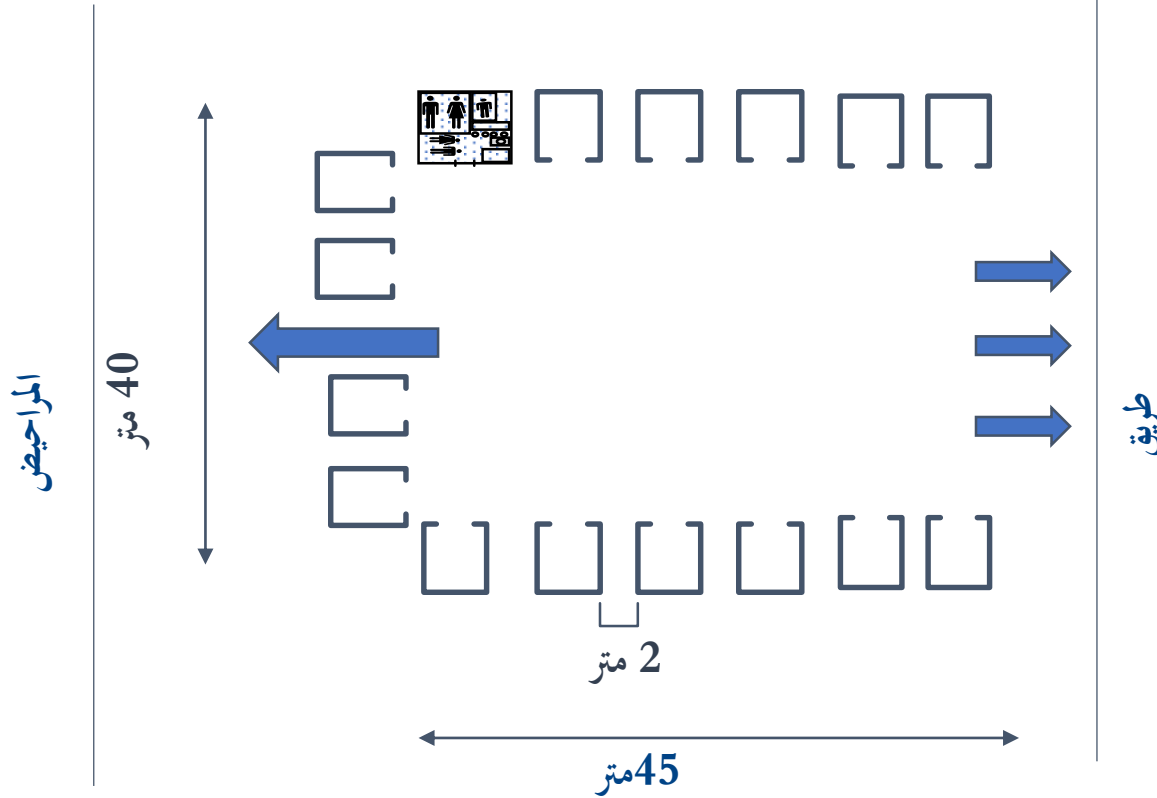
- مثال لمأوى عبارة عن خيمة/غرفة مساحتها 17.5 – 20 متر مربع تقريباً

- مساحة المأوى المخصصة للفرد = 3.5 متر مربع (إذا كان عدد أفراد الأسرة 5)



16 Shelters= 1 Community

مجموعة = 16 عائلة



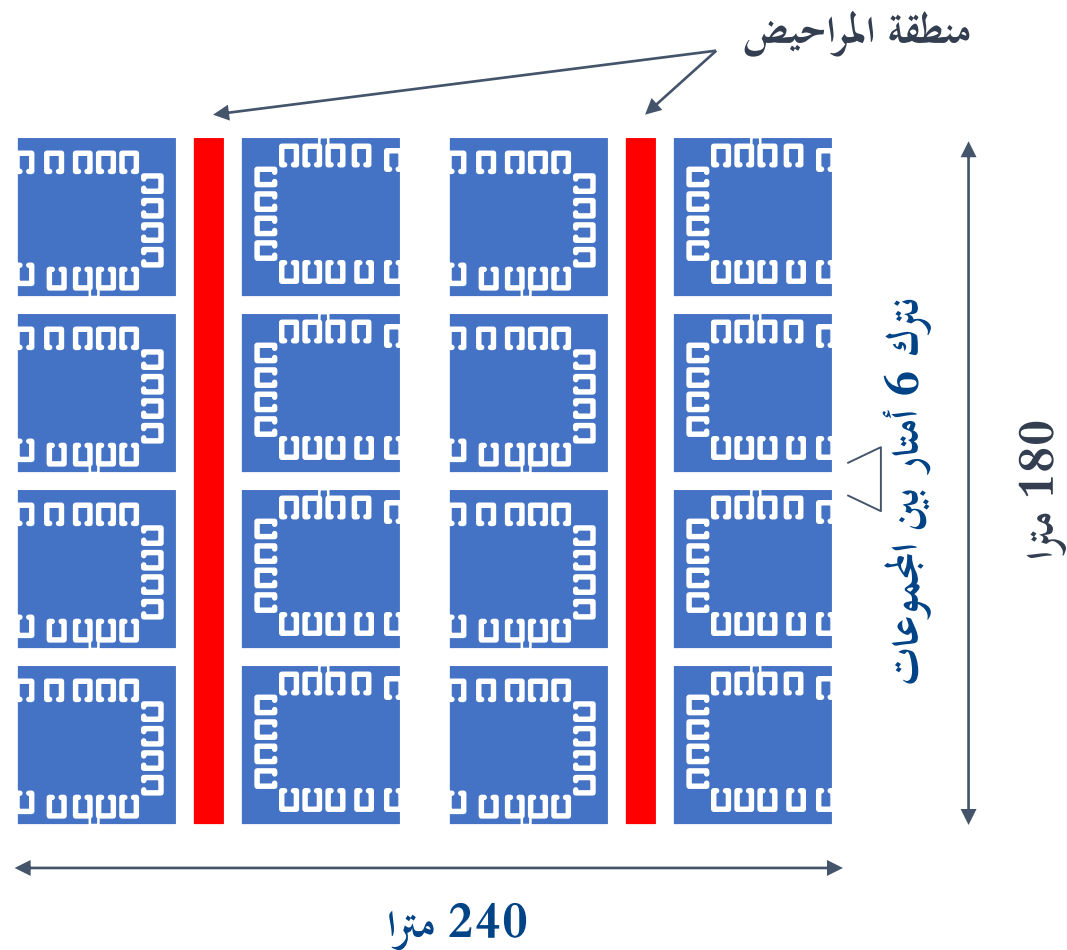
- تنصح الملاحظات التوجيهية
لدليل اسفير بالحرص على أن
يطل مأوى كل أسرة على
مساحة مشتركة أو على
مساحة معزولة تستعملها
الأسرة بدلا من أن يطل على
مدخل مأوى آخر.
- (راجع صفحة 247 من دليل
اسفير)



16 Community = 1 Block



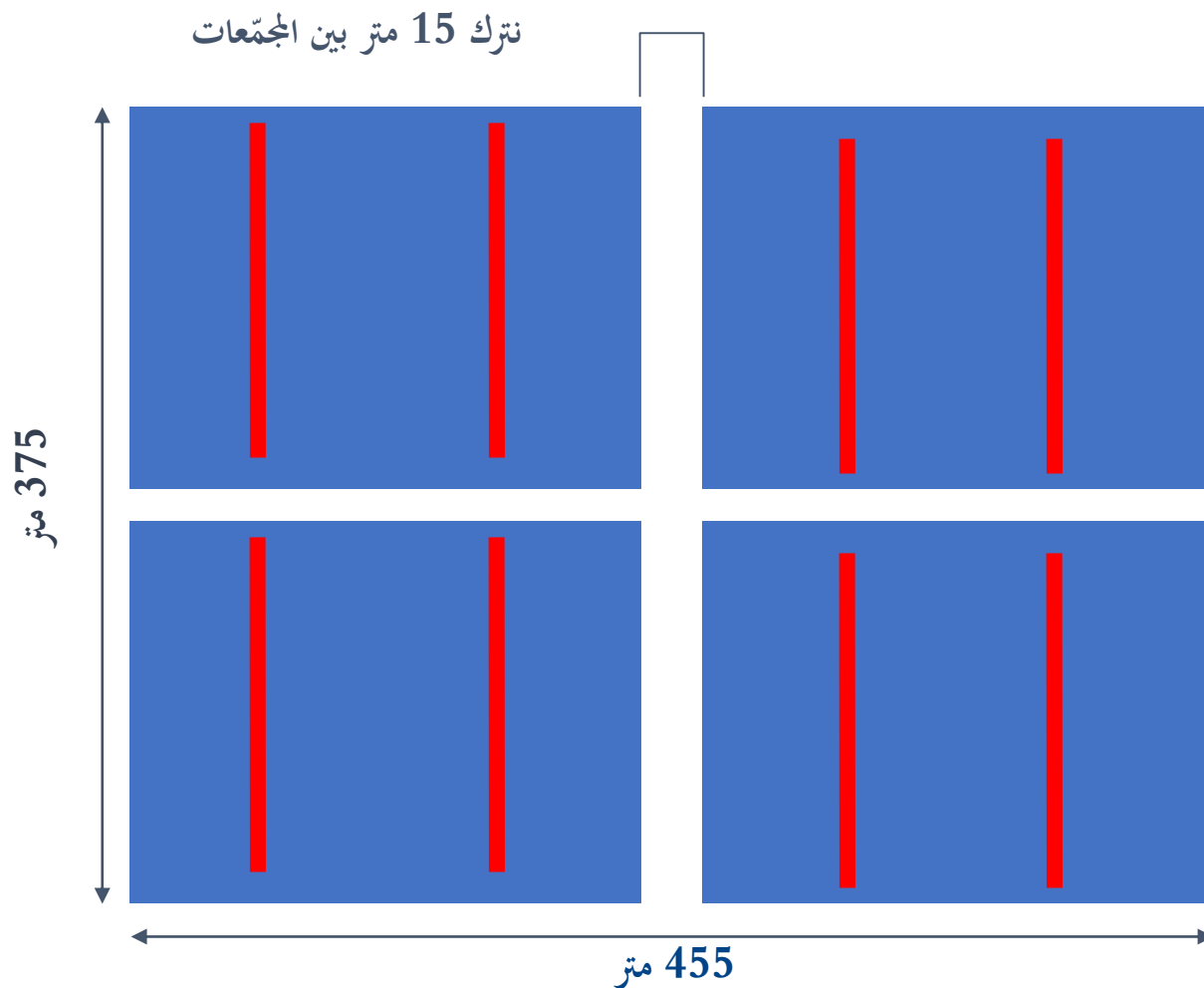
المجمّع = 16 مجموعة





4 blocks = 1 Sector

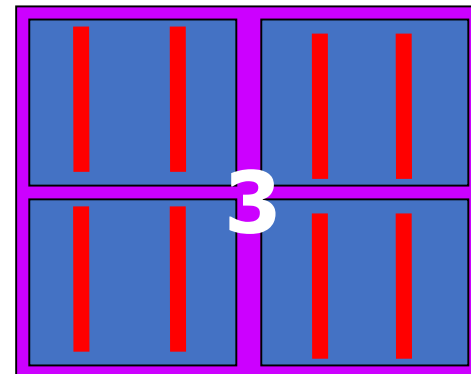
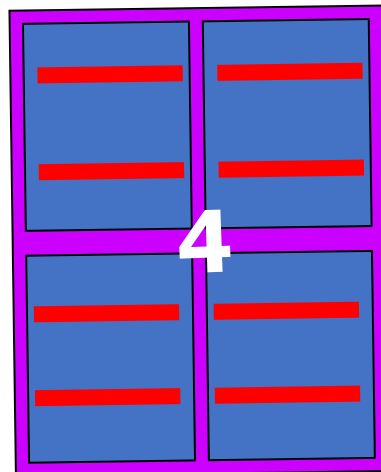
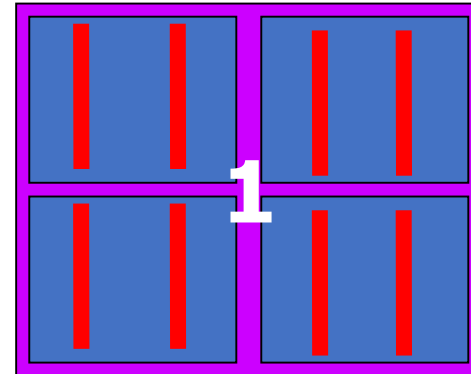
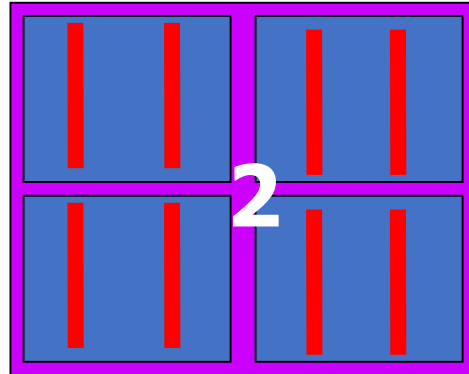
القطاع/وحدة سكنية = 4 مجمّعات

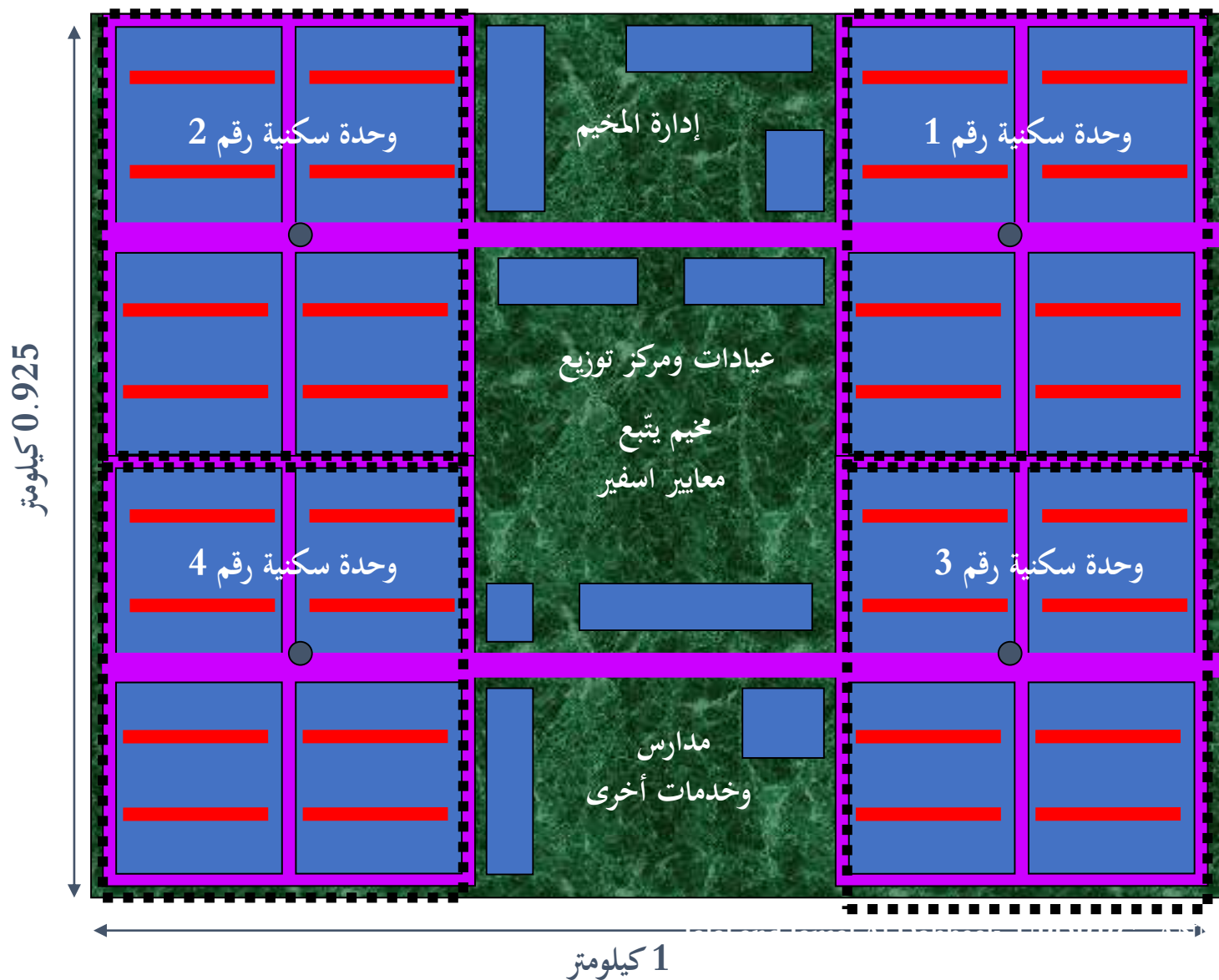




4 Sectors = Camp

المخيم = 4 قطاعات (وحدات) سكنية







زوروا
موقع تخفيف مخاطر الزلازل في فلسطين

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