

Sharing Innovations to Improve Implementation and Reporting of the Sendai Framework for DRR: Academic Hubs

Urban Planning and Disaster Risk Reduction Center

An Najah National University

Palestine.

- The concept of DRR
- Resilience: is fundamentally an interdisciplinary concept, its cross-cutting issue, etc.
- The main requirements and strategies needed to make scientific institutions to work as academic hubs in DRR are:
 - embedding DRR culturally;
 - building civil societies capacity to respond to disaster in a targeted and DRR manner;
 - becoming information-hub locally, nationally and regionally,
- **Adopting:** - Holistic-approach concepts and methodologies..
 - Local, national and international stakeholders' integrations and networking concepts;
 - Web-based platforms: Target groups individual citizens, professionals and decision-makers
 - Giving priority to the **applied research** and to the **community service** programs;

- **Academic Hubs: Using S and T to build resilience (case study)**

An-Najah University's Urban Planning and Disaster Risk Reduction Center (UPDRRC) brought players, using scientific knowledge and strategies and community services to draw together all the target groups

As an academic hub, the UPDRRC and other units at NNU has an important role in enhancing the resilience of Palestinian communities to disasters, through:

- adopting a holistic approach to DRR activities.
- adopting scientific strategies to draw together decision-makers, practitioners and the public to drive towards sustainable RR, exceeding parameters of an traditional academic centre.

As a result, this approach had a wide remit and objectives including :

- Assisting Government, practitioners with infrastructure vulnerability and local site effect conditions assessments and creating solutions;
- Drafting new Seismic Building Code regulations.
- Developing several courses and programs on DRR, including master program on DRM.
- Conducting several capacity building programs on DRR. (Tenth of TR).
- **Modeling and mapping:** Hazards, seismic vulnerability and RA.
- Developing and conducting post disaster damages assessment.
- Introducing DRR requirements on physical planning guidelines.

Building capacity within civil society and general public to cope with natural disasters by using several dissemination activities

- Developing engineering courses for non engineers and urban planning courses for not planners.
- Community service programs: **5000 students** each year: Blood donation, short courses on DRM, 50 working hours with emergency response org., working for/with vulnerable citizens (with children's, mothers, handicapped or disabled persons, etc)... meetings and workshops.

- Training courses on DRR for Journalists to create common language..
- Hundreds of Meetings, Public Lectures, Workshops, Training Courses, etc.
- Dissemination activities by using the available media: TVs, Radios, ..etc.
- Public seismic Poll: to measure the seismic awareness levels of individual citizen.





Resilience has very important role in the all DRM phases and tasks: mitigation, preparedness, emergency response and recovery and reconstruction, so it recognized as imperative for sustainable development, as well as its pivotal for the implementation of priority for actions 4 of the UNISDR science and technology (S&T) Road Map.



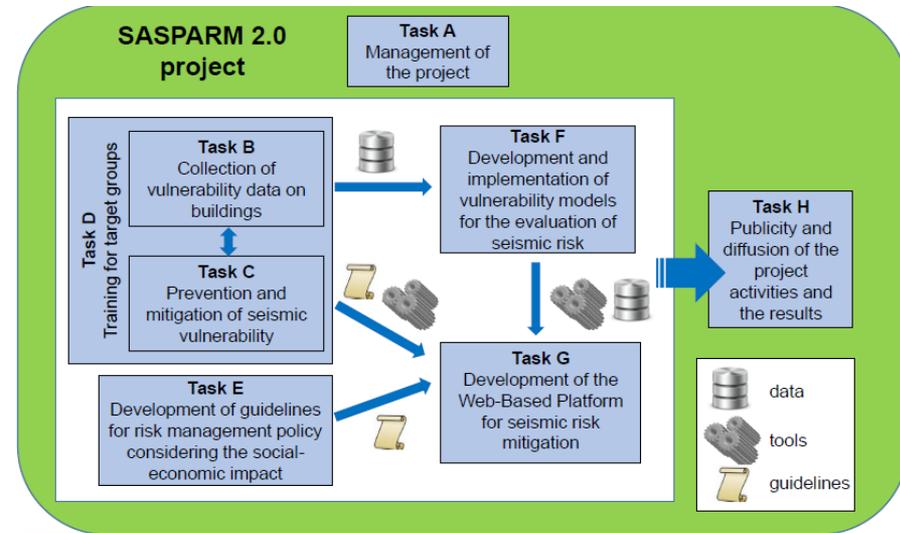
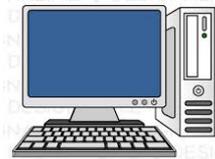
Hundreds of Meetings, Public Lectures, Workshops, Training Courses, etc



**Ex: example for regional and inter. networking and integration:
Partnership with NRA, RSS, GII, GFZ, EUCENTRE, IUSS, USGS, etc.**

Support Action for Strengthening Palestine capabilities for seismic Risk Mitigation

SASPARM 2.0



A Web platform will be realized:

- Collection of structural data

Web GIS platform

- Vulnerability and the seismic risk assessment.

- Mitigation measure as a function of the identified vulnerabilities will be suggested through the platform.
- The platform was equipped with GIS functionalities (WEBGIS)
- The stakeholders will have the possibility to identify critical conditions, since the results of seismic risk will be published in maps with a very high resolution graphical support.



**Ex. of ongoing project: SASAPARM 1 and SASPARM 2 (EU fund):
www.sasparm.ps**

Data collection

SASPARM2 Project-Selected case study

Development of urban resilience strategies by working with Citizen and stakeholders .

- Building data collection by using special forms: citizens and practitioners forms.

Name of the compiler: _____
Education Level: _____

1) Identification of the Building

Municipality: _____
Address: _____
Street Number: _____ District/Municipality: _____ Zip Code: _____
Name of the Building: _____

Geographical Coordinates (WGS 84 System) Lat: _____ Long: _____

Position of Building:

1 Isolated Building 2 Internal Building 3 End Building 4 Corner Building

2) Description of the Building

Metrics		Age		Use - Exposure		Occupants	Property
N° Total floors with basement	Average floor height [m]	Average floor area [m²]	Construction and renovation [max. 2]	Type of Use	% of Use		
<input type="radio"/> 1 <input type="radio"/> 0	1 <input type="radio"/> < 2.50	A <input type="radio"/> < 50 I <input type="radio"/> 401 - 500	1 <input type="radio"/> < 1919	<input type="checkbox"/> Housing	A <input type="radio"/> > 65%	<input type="checkbox"/> 100 <input type="checkbox"/> 18 <input type="checkbox"/> 1	A <input type="radio"/> Public B <input type="radio"/> Private
<input type="radio"/> 2 <input type="radio"/> 10	2 <input type="radio"/> 2.50-3.50	B <input type="radio"/> 51 - 70 L <input type="radio"/> 501 - 650	2 <input type="radio"/> 19 - 45	<input type="checkbox"/> Productive	B <input type="radio"/> 30-65%	<input type="checkbox"/> 11 <input type="checkbox"/> 11 <input type="checkbox"/> 1	
<input type="radio"/> 3 <input type="radio"/> 11	3 <input type="radio"/> 3.51-5.0	C <input type="radio"/> 71 - 100 M <input type="radio"/> 651 - 900	3 <input type="radio"/> 46 - 61	<input type="checkbox"/> Trade	C <input type="radio"/> < 30%	<input type="checkbox"/> 12 <input type="checkbox"/> 12 <input type="checkbox"/> 2	
<input type="radio"/> 4 <input type="radio"/> 12	4 <input type="radio"/> > 5.0	D <input type="radio"/> 101 - 130 N <input type="radio"/> 901 - 1200	4 <input type="radio"/> 62 - 71	<input type="checkbox"/> Offices	D <input type="radio"/> Not used	<input type="checkbox"/> 13 <input type="checkbox"/> 14 <input type="checkbox"/> 4	
<input type="radio"/> 5 <input type="radio"/> > 12		E <input type="radio"/> 131 - 170 O <input type="radio"/> 1201 - 1600	5 <input type="radio"/> 72 - 81	<input type="checkbox"/> Public Service	E <input type="radio"/> Under Construction	<input type="checkbox"/> 14 <input type="checkbox"/> 15 <input type="checkbox"/> 6	
<input type="radio"/> 6		F <input type="radio"/> 171 - 230 P <input type="radio"/> 1601 - 2200	6 <input type="radio"/> 81 - 91	<input type="checkbox"/> Deposit	F <input type="radio"/> Unfinished	<input type="checkbox"/> 15 <input type="checkbox"/> 16 <input type="checkbox"/> 7	
<input type="radio"/> 7		G <input type="radio"/> 231 - 300 Q <input type="radio"/> 2201 - 3000	7 <input type="radio"/> 91 - 02	<input type="checkbox"/> Strategic	G <input type="radio"/> Abandoned	<input type="checkbox"/> 16 <input type="checkbox"/> 17 <input type="checkbox"/> 7	
<input type="radio"/> 8		H <input type="radio"/> 301 - 400 R <input type="radio"/> > 3000	8 <input type="radio"/> ≥ 2002	<input type="checkbox"/> Touristic - Accommodation		<input type="checkbox"/> 17 <input type="checkbox"/> 18 <input type="checkbox"/> 9	

3) Structural Data

Vertical Structure of the Building

If the building is in reinforced concrete:

B.1 The building has no walls at floors: B.2 The building has partially walls at floors:

<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4
<input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8
<input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> ≥12	<input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> ≥12

B.3 The building is composed totally by walls

Name of the compiler: _____
Education Level: _____

1) Identification of the Building

Municipality: _____
Address: _____
Street Number: _____ District/Municipality: _____ Zip Code: _____
Name of the building: _____

Geographical Coordinates (WGS 84 System) Lat: _____ Long: _____

Position of Building:

1 Isolated Building 2 Internal Building 3 End Building 4 Corner Building

2) Description of the Building

N° of floors		Age		Use - Exposure		Occupants	Property
N° Total floors with basement	Construction and renovation [max. 2]	Type of Use	N° Units of use	% of Use			
<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3	1 <input type="checkbox"/> < 1919	<input type="checkbox"/> Housing	<input type="checkbox"/> 100 <input type="checkbox"/> 18 <input type="checkbox"/> 1	A <input type="radio"/> > 65%	A <input type="radio"/> Public B <input type="radio"/> Private		
<input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6	2 <input type="checkbox"/> 19 - 45	<input type="checkbox"/> Productive	<input type="checkbox"/> 11 <input type="checkbox"/> 11 <input type="checkbox"/> 1	B <input type="radio"/> 30-65%			
<input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	3 <input type="checkbox"/> 46 - 61	<input type="checkbox"/> Trade	<input type="checkbox"/> 12 <input type="checkbox"/> 12 <input type="checkbox"/> 2	C <input type="radio"/> < 30%			
<input type="radio"/> 10 <input type="radio"/> 11 <input type="radio"/> ≥12	4 <input type="checkbox"/> 62 - 71	<input type="checkbox"/> Offices	<input type="checkbox"/> 13 <input type="checkbox"/> 14 <input type="checkbox"/> 4	D <input type="radio"/> Not used			
	5 <input type="checkbox"/> 72 - 81	<input type="checkbox"/> Public Service	<input type="checkbox"/> 14 <input type="checkbox"/> 15 <input type="checkbox"/> 6	E <input type="radio"/> Under Construction			
	6 <input type="checkbox"/> 82 - 91	<input type="checkbox"/> Deposit	<input type="checkbox"/> 15 <input type="checkbox"/> 16 <input type="checkbox"/> 7	F <input type="radio"/> Unfinished			
	7 <input type="checkbox"/> 91 - 02	<input type="checkbox"/> Strategic	<input type="checkbox"/> 16 <input type="checkbox"/> 17 <input type="checkbox"/> 7	G <input type="radio"/> Abandoned			
	8 <input type="checkbox"/> ≥ 2002	<input type="checkbox"/> Touristic - Accommodation	<input type="checkbox"/> 17 <input type="checkbox"/> 18 <input type="checkbox"/> 9				

3) Main Material of the Building's Vertical Structure

If the building is in reinforced concrete:

B.1 The building has no walls at floor(s): B.2 The building has partially walls at floor(s):

<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4
<input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8
<input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> ≥12	<input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> ≥12

B.3 The building is composed totally by walls

Form - Practitioners

Form - Citizens

Att. See the project poster.



Training and workshops:

- Training for university students
 - Training for practitioner eng.
 - Training for citizens
 - Workshops and lectures for stakeholders and policy makers
-
- Identify the vulnerability class of the buildings according to their structural data.
 - Appropriate retrofit measures for the mitigation of seismic risk will be suggested to the end users of the platform.



Project follow up



- ✓ Extend the case study of Nablus municipality not only to all the other Palestinian municipalities but also to other Third and European Countries;
- ✓ Engage policy makers and government to foster long-term actions. Moreover, promoting Palestinian stakeholders' activities in a risk mitigation perspective with the foundation of a Palestinian Civil Protection Mechanism;
- ✓ Establish the concepts of risk governance to account for the possibility of earthquake insurance coverage (considering that the related cost would be reduced if private initiative in retrofitting world be taken);



Project follow up



- ✓ Ensure the maintenance of the Web-Based Platform to collect larger amounts of data on seismic vulnerability of citizens' properties first and public buildings next in order to keep the process of increasing awareness going on after the project lifetime.
- ✓ Promote new undergraduate and graduate courses on seismic risk mitigation since the training on this topic will play a fundamental role for the continuation of the project aims even after its lifetime. For this reasons, additional resources will be found to organize a new Master program in Palestine at the An-Najah National University, covering the topics of seismic risk mitigation. This action is already strongly encouraged by the Ministry of Education.