

# UAP Emergency Architects

Status Report

*Prepared by:*  
*Ar. Rey S. Gabitan*  
*Head, UAP Emergency Architects*

# UAP Emergency Architects

- The UAP Emergency Architects (UAP-EA) was initially organized on Nov. 13, 2013. The formation of the group was approved by the UAP National Board of Directors.
- Goal is to help rebuild lives and support local communities in the Philippines affected by disasters and calamities.

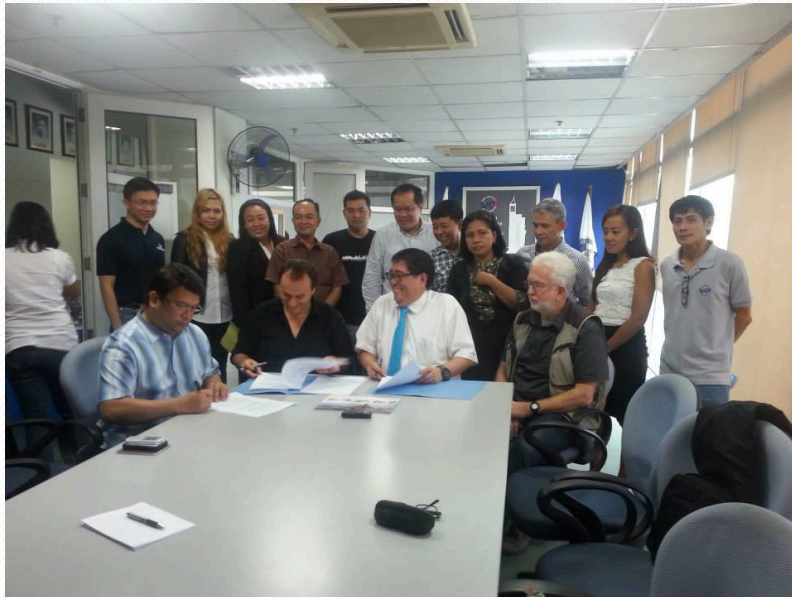


# UAP Emergency Architects

- Objectives of UAP-EA
  - to make available to devastated communities the necessary technical expertise to help reduce avoidable risks from disasters.
  - to provide appropriate and sustainable assistance to the populations affected by disasters and calamities.
  - to develop the capability of architects in helping communities affected by disasters.
  - to preserve and promote architectural, historical and cultural heritage
- The group was divided into working clusters:
  - *Field Evaluation/Assessment Group*
  - *Temporary Shelters/Facilities Group*
  - *Permanent Housing/Facilities Group*
  - *Planning Group*
  - *Heritage Conservation Group*
  - *Capacity-Building Group*

# Partnerships

- Signing of Memorandum of Understanding on Nov. 20, 2013 with Emergency Architects Foundation (France) for cooperation and collaboration on humanitarian efforts by AEF and the UAP-EA.



# Needs Assessment

- A needs assessment was undertaken in Western Visayas (Northern Iloilo and Capiz) on Dec. 2-4, 2013 to determine extent of damage and identify initial intervention that can be undertaken



# Needs Assessment

- A site visit to a schoolbuilding reconstruction project undertaken by Emergency Architects (France) in Capiz City. UAP Capiz Chapter provided local support to the initiative.



# Needs Assessment

- A visit to a temporary relocation site in Estancia, Iloilo (with an oil spill) to determine shelter provision and interviews with foreign humanitarian




# Construction Tool Kits


- Based on the rapid needs assessment and coordination with other humanitarian groups, UAP Emergency Architects decided to distribute construction tool kits to help in the initial construction of temporary shelters and repair damaged structures in remote areas.
- The construction tool kits were to be distributed in identified communities wherein each kit/set contains the following: saw, hammer, G.I. tie wires, ropes, 2” nails and 1-1/2” nails. Cost per set is at P1,000.00.
- UAP Capiz Chapter distributed 300 pieces of community construction tool kits in different municipalities in Capiz and Roxas City.
- A total of 372 pieces of tool kits were handed over to the Iloilo Provincial Governor for distribution to affected municipalities in Northern Iloilo (Estancia, Carles, Ajuy). The distribution was facilitated by the UAP District C-4.

# Construction Tool Kits

## Roxas City - Capiz



 **UNITED ARCHITECTS OF THE PHILIPPINES**  
and  
**UAP Emergency Architects**  
with  
**UAP Capiz Chapter**  
distributes  
**Community Construction Tool Kits**

In cooperation with:  
Korean Institute of Registered Architects (KIRA) \* UAP Kuala Lumpur Chapter \* UAP Barasoain Chapter  
UAP QC-South Triangle Chapter \* UAP Sta. Mesa Chapter \* UAP District A-5 & UAP CAMANAVA-Hilaga Chapter 



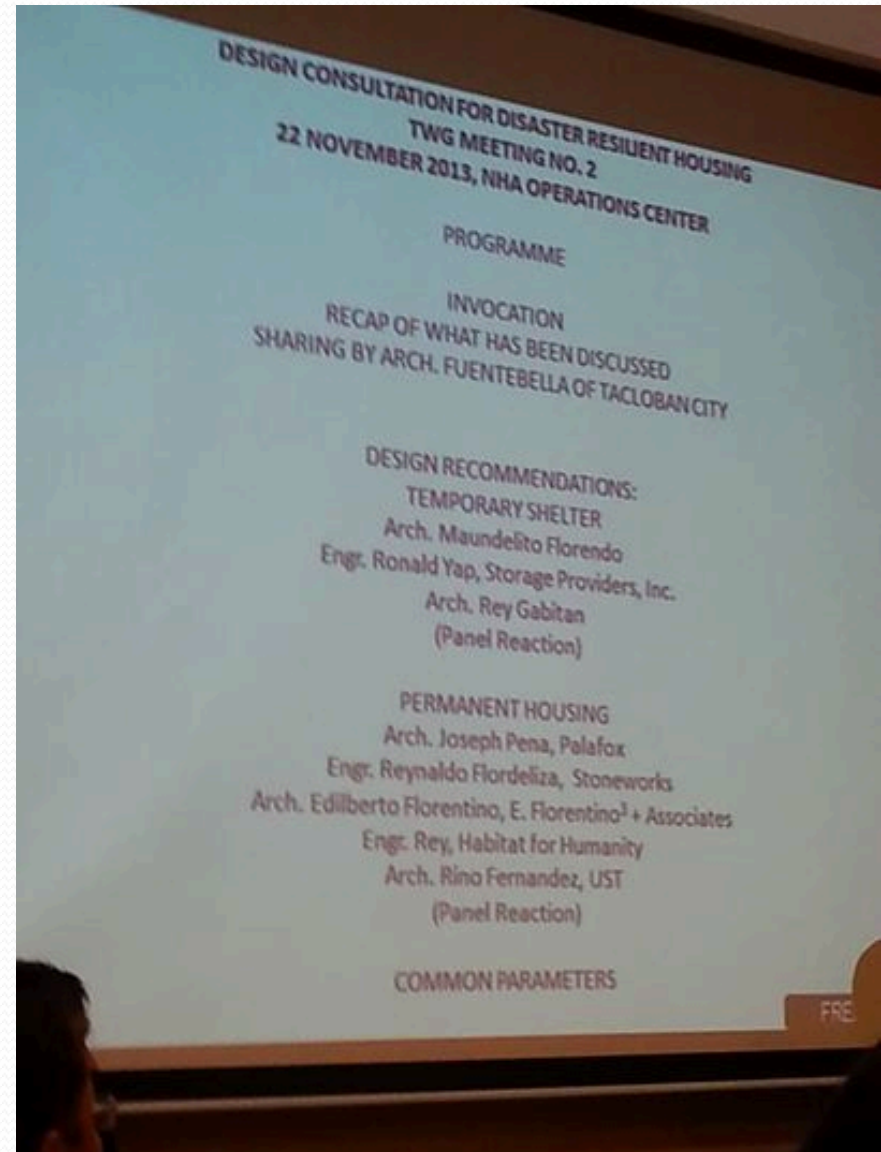
# Construction Tool Kits

## Northern Iloilo



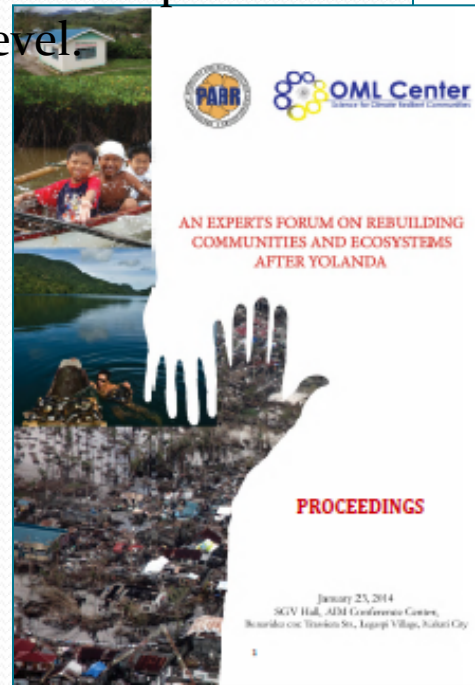
# Capacity Building

- UAP-EA participated on a Design Consultation for Disaster-Resilient Housing organized by the National Housing Authority on Nov. 22, 2013



# Capacity Building

- The Office of the Presidential Assistant for Rehabilitation and Recovery (PARR) and the Oscar M. Lopez Center for Climate Change Adaptation and Disaster Risk Management Foundation, Inc. (OML Center) jointly organized on Jan, 23, 2014 the **Experts Forum on Rebuilding Communities and Ecosystems After Yolanda (Haiyan)**. The forum served as a discussion platform on the current state of CCA-DRM knowledge on recovery and rehabilitation to 307 scientists and practitioners from various disciplines at the local, national and international level.
- UAP-EA facilitated the session on Resilient Residential Designs.



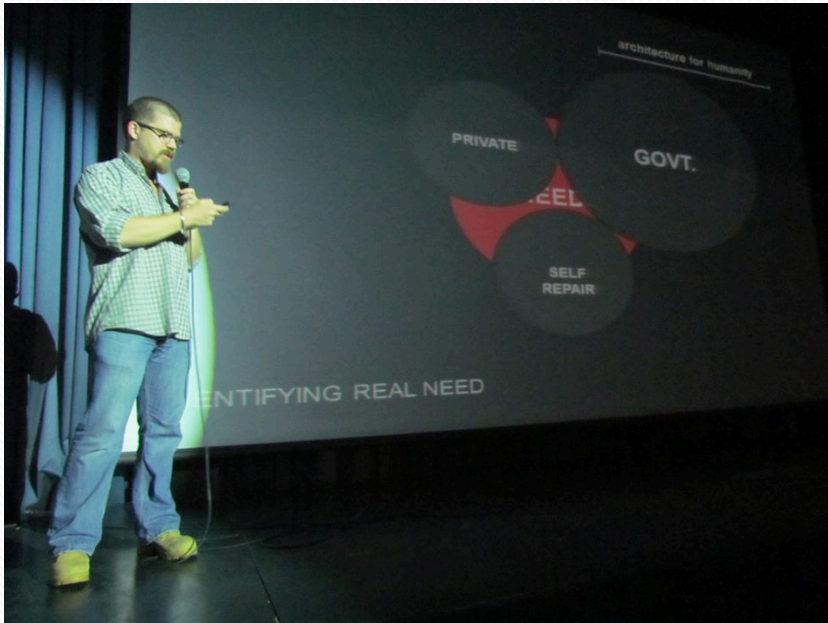
The Experts Forum Organizing Committee would like to express its gratitude to the following institutions for helping achieve the goal of the forum through their valuable support, including sponsoring and providing speakers and audience.



**Participants**

# Capacity Building

- In partnership with Architecture for Humanity, the first in a series of seminar/workshops for architects was held on Mar. 8, 2014.



## PROGRAM PLANNING, PROJECT SELECTION & PARTNER STRATEGY

CAPACITY BUILDING SEMINAR ON  
POST-DISASTER RECOVERY FOR ARCHITECTS  
AND BUILT ENVIRONMENT PROFESSIONALS

March  
Saturday 8

1:30PM - 5:30PM

Location:  
UAP TEATRO ARKITEKTO  
53 Scout Rallos Street, Diliman, Quezon City  
7th floor

*Long-term recovery requires the commitment of the entire Filipino architecture community.*

*Come to an informative seminar led by Architecture for Humanity's reconstruction and resilience expert, Eric Casal. The seminar will cover Program Planning, Project Selection and Partner Strategy. Learn how you can assist in designing and implementing community-driven, long-term solutions for communities in the Visayas. Together architects will help the Philippines build back better!*

### Program:

- Opening remarks: - Rozanno Rosal - UAP National President  
Introductions: - Rey Gabellan - UAP Emergency Architects  
- Stephanie Giles - Coordinator, UAP Emergency Architects Capacity Building Group  
Training seminar: - Eric Casal - Director Reconstruction and Resilience, Architecture for Humanity Global  
Closing remarks: - Leah dela Rosa - Executive Director, UAP Professional Development Commission.

There will be a 15 minute intermission between training sessions. CPE accreditation will be offered for this course by the Professional Regulations Commission.



**Eric Casal,**  
Director, Reconstruction and Resilience

Eric's expertise in disaster reconstruction grew from years of post-disaster work with Architecture for Humanity in several regions around the world. As Director of Reconstruction and Resilience, Eric is currently responsible for post-disaster programs in Haiti, Japan, the United States and now the Philippines.

Eric holds a Masters in Architecture, a Masters in Construction Management and an MBA from Washington University St. Louis.

### Presented by:

architecture for humanity



### Please respond:

Contact Alma or Lester at the  
UAP National Headquarters  
(632) 412 6384  
(632) 412 6403

or email:  
uap\_seminars@yahoo.com

### Admission is FREE:

Donations are most welcome, though, for the benefit of the victims of Yolanda (Typhoon Haiyan)

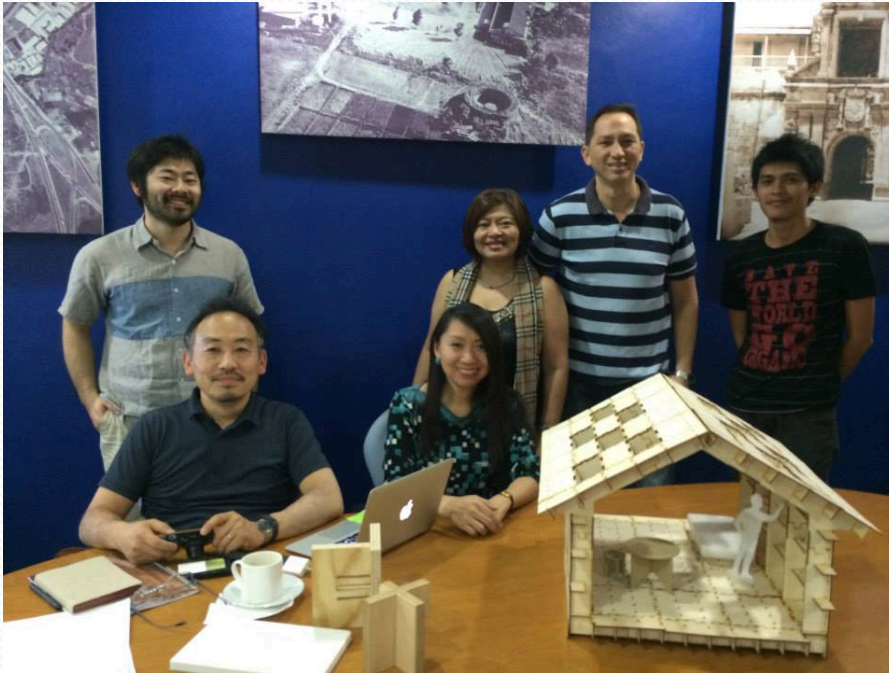
# Capacity Building

- The Director for Reconstruction and Resilience of AfH, Ar. Eric Cesal delivered a lecture on Program Planning, Project Selection & Partner Strategy to members of the the UAP EA and other architects and professionals from the built environment.



# Capacity Building

- Prof. Hiroto Kobayashi conducted a demonstration last Mar. 20, 2014 to UAP-EA members of their proposed disaster-resilient structure made of modularized laminated veneer panels.
- He visited some areas in Visayas in coordination with local chapters to determine areas for possible construction of a prototype structure.



# Capacity Building

- UAP-EA participated in the Technical Workshop on Holistic Solutions for Resilient Low-cost Housing on 2 – 3 April 2014 at the Oracle Hotel along Katipunan Avenue, Loyola Heights, Quezon City.
- The workshop was organized by the Environmental Science for Social Change (ESSC), Association of Structural Engineers in the Phils. (ASEP), UNESCAP, and Hilti Foundation.
- The group agreed to formulate a Housing Code that would change some design parameters for one to two storey houses.



# Capacity Building

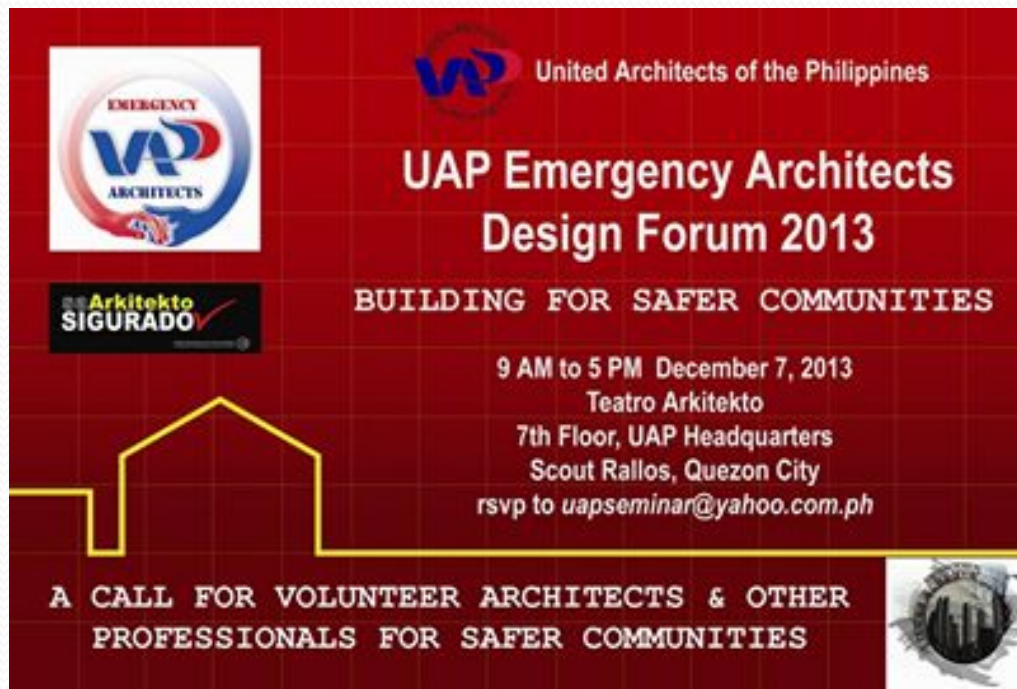
- drafting the Memorandum of Understanding and ultimately a Memorandum of Agreement between the UAP-EA and the Architecture for Humanity (AfH) for the delivery of capacity building seminars to architects and to the affected communities.



- Meeting with Hiromi Tabei of Architecture for Humanity last May 31, 2014. Initial work for the MOU was coursed thru email exchanges. She left for Tacloban to discuss with local architects the schoolbuilding reconstruction projects to be undertaken by AfH.

# School/Evacuation Centers

- UAP-EA made a call to UAP members to submit designs for temporary shelters and permanent facilities, i.e., schools/evacuation centers and community multipurpose centers /evacuation centers.



**United Architects of the Philippines**

**UAP Emergency Architects Design Forum 2013**

**BUILDING FOR SAFER COMMUNITIES**

9 AM to 5 PM December 7, 2013  
Teatro Arkitekto  
7th Floor, UAP Headquarters  
Scout Rallos, Quezon City  
rsvp to [uapseminar@yahoo.com.ph](mailto:uapseminar@yahoo.com.ph)

**A CALL FOR VOLUNTEER ARCHITECTS & OTHER PROFESSIONALS FOR SAFER COMMUNITIES**

Arkitarkto SIGURADO



The United Architects of the Philippines



Emergency Architects  
Design Forum 2013 – Solutions for Safer Communities  
December 7, 2013 Teatro Arkitekto, UAP Headquarters

**PROGRAM**

9:00-9:10 am	Registration
9:10 am	Invocation, National Anthem, UAP March, Architects' Credo
9:20 am	Welcome Remarks UAP NP Ar. Rozario C. Rosal, uap
9:30 am	Introduction - Bids Post-Disaster Assessment Ar. Ruth Equipa
10:00-10:25 am	E. Florentino* + Associates on Resilient Architecture Ar. Ediberto F. Florentino, UKVA, APEC Architect, ENP
10:25-10:50 am	The Role of Architects in Psycho-social Therapy to Internally Displaced Persons in Mindanao due to Calamities and Armed Conflicts Ar. Glynisse Dy
10:50-11:15 am	3 Ideas: Mitigation to Adaptation Ar. Miguel Guerrero, uap
11:15-11:40 am	MSF Shelters - Modular, Sustainable, and Flexible Shelter System Adapting Geodesic Architecture for Disaster Resiliency Ar. Maunello Florindo
11:45-12:05 pm	Amakan Houses - Temporary Shelter for Typhoon "Sanding" Victims Ar. Ma. Linda Escaba
12:05-1:00 pm	LUNCHBREAK
1:00-1:25 pm	Learning From What Works: Historic Filipino Architecture as Model for Climate-Change Responsive Design Ar. Mia Guerrero - Yuzon
1:25-1:50 pm	Immediate Temporary Shelter Through Indigenous Materials & Special Steel Connectors UAP Diliman Proposal for Temporary Shelter for Typhoon "Pablo" Victims Ar. Napoleon Ibanez Jr.
1:50-2:15 pm	Humanitarian Shelter Approach - Typhoon "Sogha/Pablo" Ar. Michael Collis
2:15-2:40 pm	Isidoro - A Temporary / Progressive / Permanent Home for Victims of Natural Disasters Ar. Tarcilo Vasquez
2:40-3:05 pm	Flat Pack Modular Systems Ar. Scott Gold
3:05-3:30 pm	Dome Structures: Disaster Resilient Housing Mr. Roden Guinio and Mr. Jemelyn G. Yuzon
3:30-3:55 pm	Sustainable Post-Disaster Transitional Structures Ar. Mari Angela Virtucio
3:55-4:20 pm	Design Against the Elements - Air, Water, Earth, & Fire Ar. Dale Jose Gozar
4:20-4:30 pm	Presentation Consolidation UAP PSG Ar. Rey S. Gabitan, uap
4:30 pm	Closing Remarks UAP NEVP Ar. Liza B. Rivera, uap

\* Exhibit for Model Houses by National University Students can be viewed at the Ground Floor Area.  
\*\* Lunch / Snacks can be bought outside the theatre.

# School/Evacuation Centers

- A compilation of submitted designs will form part of the encyclopedia of resilient designs to be made available to any participating donor in the rebuilding efforts.

**S A F E Haven (SH Area)**  
**Structure Against Ferocious Environment**

• **HAVEN** Place of Shelter, Safe Place, Refuge

**OBJECTIVES:**  
 To design a structure/ space that could be use as shelter during typhoon outdoors.  
 This structure can be adopted in a "Light Structure" or in an informal settler's dwellings.

**CRITERIA:**  
 Structurally Stable  
 Economical  
 Practical  
 Can be replicated and can be recommended for less legislation.

**DESIGN INSPIRATION:**  
 Panic Room  
 Household Shelter (HH Shelter) of Singapore's residential dwellings.

**DESIGN APPLICATION**

**SECTION**

**SAMPLE PLAN A**

**SAMPLE PLAN B**

**UAP Emergency Architects**

**NOTE: SH AREA TO BE BUILT WITH RC STRUCTURE (COR WALL) WITH RC CEILING.**

**Rationale of Design Concept:**  
 There is no "safe" place like home.  
 Filipinos could NOT afford to construct a "typhoon proof" house or building some as there is no such thing as a "earthquake" proof building, but it could be considered a "typhoon resistant" structure "with in" a dwelling unit that could be a place of shelter during the calamities. The idea is that families need not to "evacuate" from their "home" unless the place is near an high risk area, but could stay safe if there is a certain "space" within their dwelling unit that they could be safely secured from the elements.  
 The "SAFE Haven" or "SH Area" is supposedly a space inside the house and ideally the hallway area, as it's partly a circulation space that every family can stay during the range of the storm, if it is an ideal space as long as it is in the "middle" of other room/spaces inside the house. As this adjacent spaces will act as a "buffer" for the "SH" area. It is recommended that as much as possible that the wall that enclosed this space must be rigid and able to withstand the indirect pressure from the adjacent rooms. A concrete ceiling above is highly recommended to be made of reinforced concrete so that even the main roof will blown off the family is still an "enclosed" space and need not to go out. A door that is located on the end of the hallway going out can be reinforced so that the hallway can be "totally" enclosed during the storm.  
 This idea can be replicated as well as can be recommended and could be applicable with those informal settlers as well as with those limited lots as the areas that need to be rigid in just a small portion and not used to be swayed by the land/roads as it's a minimal space of "permanent" structures. In terms to be cost is economical as it needs a minimal amount of space that need to be rigid.

**KOINDARCH**  
 ARCHITECTS PLANNERS  
 At. ERIC L. DEMINGO uap  
 Principal Architect  
 Suite 11-03, No. 802, Bldg. 8, JICA Tower, JICA Compound, Alabang, Muntinlupa City, Philippines 1510  
 Tel No. (02) 8717-3522, 8762-2000 (land line), 8762-2000 (cell phone)

**Temporary to Permanent Shelter**  
**SMARTHOVEL**  
 Split Bunker Shelter

**eco SHADE**  
 SUSTAINABLE HOUSING AGAINST DISASTROUS ENVIRONMENT

**HOVEL**  
 a small, miserable or very humble dwelling house / small crude shelter used as a dwelling

A temporary shelter also consider as permanent loft cube that was designed to withstand any natural disasters.

3.5 X 6 meters, 21 square meters dwelling made of durable metal frame main structure.  
 Prefabricated wood panels on 2 side walls,  
 Concrete slab roof adjoining front and back concrete wall.

concepts and designs:  
**Arch. Adonis C. Canonicato**  
 DESIGN DIRECTOR  
**PICD INTERNATIONAL (QATAR) WLL**  
 DOHA - QATAR  
 INTERIM PRESIDENT  
**UAP QATAR CHAPTER 2008 - 2010**

email:  
 adonis.canonicato@qapico.com  
 brajacks@hotmail.com

**Photovoltaic Array**

**Harvested Rain Water Tank**

**Passive Heat Ventilator**

**Unit 1**  
 Bedroom / Bunker

**Unit 2**  
 Bedroom / Bunker

**Sharing Kitchen / Toilet & Bath**

**Perspective View**

**UAP Emergency Architects**

**UAP Emergency Architects**

# School/Evacuation Centers

## School to Temporary Shelter

2 Modules of 9 x 7 meters Classroom



**eco SHADE**  
SUSTAINABLE HOUSING AGAINST DISASTROUS ENVIRONMENT

This proposed school building was designed as an answer to provide emergency shelter in disaster comes to a community. The project of this program was specifically designed for education center as well as a shelter to where our occupants can be housed temporarily. The designed was made to look modern and the materials to be used were considered to be sustainable. The designer also took into consideration that more and stronger lightness on items could be the source of innovation to make the window shutter for the rooms, protecting them from strong winds & strong typhoons during storm surge. The floor was also designed to be made of concrete that will get pulled in case it experiences its load. There is a central water storage tank over buildings, where supplies for the occupants can be kept temporarily. The designed might look expensive on the first glance but having the materials that can be source around it a reasonably priced but not much or greater than the proposed budget. If given the chance, this proposed could be built. I am sure there are much more evacuees willing to live than to leave their home. The building though was intended for shelter also provides a number of opportunities for lightness within, considering that they have their own dwelling place. It also a form of cheap and hope for those victims that things build a shelter structure can benefit them, securely while waiting, rebuild their own lives after the disaster. We used to build these temporary shelters that look typical and not that tall but the same safety. However, today we have young and innovative designers that can create modern and yet sustainable designs that can withstand typhoons & strong winds of some sort.

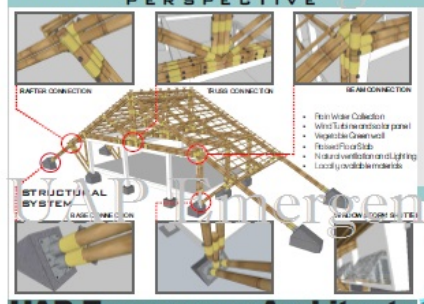
"Let's not limit our creation by just to renovate but rather to renovate as well."

concepts and designs:  
**Arch. Adonis C. Canonicato**  
DESIGN DIRECTOR  
PICO INTERNATIONAL (QATAR) WLL  
DOHA, QATAR  
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UAP Emergency Architects



## Sustainable + Strong + School + Home = S3H



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**THE CONCEPT :**

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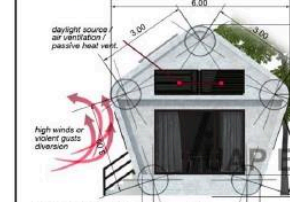
In times of calamity, schools are converted into emergency evacuation centers. S3H (Sustainable + Strong + Home) focuses on how versatile a school can be. The combination of sustainability through the various use of indigenous materials, and other green design features with durability, makes it different and more sustainable than other buildings. S3H school is justifies the main component of the design, its durability and especially, its low cost and cheaper method of construction. Alternative uses that support the roof also acts as columns connected directly to the ground. This design makes it more resilient against high-speed wind disturbances. Storm shutter louvers, measured to an appropriate size enclose the building from typhoons. This allows a passive wind direction and lessens wind drag as wind sets immediately, as it penetrates the building. It can be used also to protect windows from breaking during storm.

**PAL A FOX**  
AGGREGATES

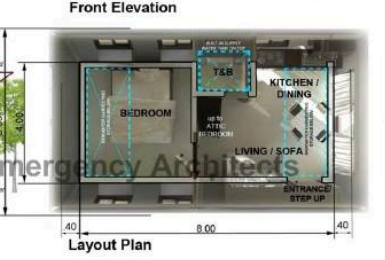
11/F-6782 Ayala Avenue,  
Makati City, 1226 Philippines  
Tel: (832) 872-2541 ext.55  
Fax: (832) 893-0197  
www.palafoxaggregates.com

## Permanent Shelter

Bahay eCo-BU (Build Uniquely)  
Single Family Dwelling Unit



UAP Emergency Architects



UAP Emergency Architects

**eco SHADE**  
SUSTAINABLE HOUSING AGAINST DISASTROUS ENVIRONMENT

BAHAY KUBO (house / hut)  
"BAHAY eCo-BU"  
(eco-House\_Build Uniquely)


We have been blessed generously with natural light around us, so why not harness from it?

Alternative energy will be of great importance in the future. Solar power will make a difference in one's way of living and view once we started utilizing it.

concepts and designs:  
**Arch. Adonis C. Canonicato**  
DESIGN DIRECTOR  
PICO INTERNATIONAL (QATAR) WLL  
DOHA, QATAR  
INTERIM PRESIDENT  
UAP QATAR CHAPTER 2008 - 2010  
email:  
adonis.canonicato@qa.pico.com  
brojack@hotmail.com

UAP Emergency Architects

# School/Evacuation Centers



## Design Charette / Workshop

# Disaster-resistant and sustainable classroom building and homes in the Philippines

February 22, 2014, Saturday 1:00 - 5:00pm  
7000 Minoru Boulevard # 140  
Richmond, B.C. V6Y 3Z5

Snacks and drinks to be provided and Certificate of Attendance to be presented to all participants.

All members are invited to attend and participate in this brainstorming session and come up with an idea on the design prototype of a disaster-resistant and sustainable classroom building and homes in the Philippines

Please RSVP by phone to Joe Larano - 604.376.4158  
Edna Avenido-Lim - 604.475.0883  
Antonio rigor - 604.723.8874  
Eric Pablo - 778.928.6917

For additional details visit our UAP-BC Facebook

### BAGYO, LINDOL, BAHA atbp THE SUPER SCHOOL & EVACUATION CENTER THE MAKING OF A DISASTER RESILIENT CLASSROOM BUILDING

... give this tragedy a very real and human face, and to move others to action, you can also use your role to uplift the spirits of the Filipino people — to find stories of resilience, hope, and faith, and show the world just how strong the Filipino people are. — President Benigno Simeon Aquino III

**G**lobal climate change is arguably the greatest threat facing our civilization. It is being felt in every corner of this planet. Products of climate change such as super typhoons, hurricanes, cyclones, flash floods and other natural disasters with enormous power and magnitude are becoming a regular occurrence.

World governments offer no immediate solutions to reverse this phenomenon. We cannot afford to wait any longer for the solution to come while we watch in horror as lives and the massive destruction being brought by these disasters. We have to act, reshape our lives and adapt to the challenge of this global weather change.

The "Super School and Evacuation Center" is a response to this challenge. The primary function of this model classroom building is to house our school children in the course of their learning development during all kinds of weather and environmental conditions. The classroom building does not only provide safety and shelter but its design is responsive to environment and ecology.

This classroom building will be the center of the continuity's socio-political affairs during off-school periods, importantly during the disasters and emergency events, the Super school acts as a temporary shelter and evacuation center for those who are rendered homeless by the onslaught of these disasters.

The Super School is robust, strong and functional to the benefit of the school children and residents alike. It is indeed a living testament to the Filipino ingenuity and resiliency especially during disaster periods.



**PROJECT DESCRIPTION**

1-STORY 2- CLASSROOM BLDG.

The typical size of the classroom is a standard 7 m (W) x 9 m (L) module for a maximum number of 45 pupils per classroom as specified by Dep Ed.

Two entry/exit door 1.00 m wide by 2.10 meter high.

Sloped ceiling: minimum height of 2.80 to a maximum height of 3.70 meters.

Natural wind ventilation through bilateral fenestration. Total window openings is not less than 10 square meters. Window sill height is 0.90 meters.

Illumination is provided through 4 units 2-40 watts fluorescent light fixtures.

Partition between classrooms is from floor to ceiling.

Accessible ramp 1:12 slope provided.

Access ladder to roof for rescue in the event of extreme flooding.

Space for relief storage & distribution.

UNITED ARCHITECTS OF THE PHILIPPINES  
BRITISH COLUMBIA CHAPTER

DESIGNER:  
JOE B. LARANO, JR.  
Architect AIBC, MRAC, LEED AP, UAP

PROTOTYPE DESIGN  
Disaster Resilient Classroom Building for the Philippines

EXCAVATION

CONC. BLINDING

FOOTING & THE BEAMS

COLUING & BACKFILLING

GROUND BEAMS

SUPERSTRUCURE

ROOF & TRUSSES

ARCHITECTURE SYSTEM

### BAGYO, LINDOL, BAHA atbp THE SUPER SCHOOL & EVACUATION CENTER THE MAKING OF A DISASTER RESILIENT CLASSROOM BUILDING

**ENVIRONMENT & SUSTAINABLE STRATEGIES**

**RAINWATER HARVESTING**  
Rainwater is a free and enormous resource in many parts of the country, the design incorporates rainwater harvesting. The rainwater collection surface is the metal roof draining to simple metal gutter which in turn leads the rainwater to series of downspouts down to cistern. After it is stored before the storage to remove leaves, solid objects or any surface pollutants that accumulates on the roof. The rainwater is to be used for garden and landscape irrigation and can be used for any washing or cleaning purposes.

**PHOTOVOLTAIC CELLS/ SOLAR PANELS**  
Sun energy is free and a limitless power the lighting needs and a number of classroom additional equipment. A number of solar arrays are strategically located on sloped roof top to capture the maximum sunlight. The installation of solar energy system will effectively cut off or reduce reliance on municipally district electric supply and can make the school building be constructed in far-flung places and in remote areas.

**LOCALLY MANUFACTURED CONG. HOLLOW BLOCKS AND WOOD MATERIALS.**  
As concrete hollow blocks are abundant in supply in many locales, the transport of the hollow blocks to project sites is minimized. In such as the installation or laying-out of hollow blocks is simple, local materials can be used to the job, minimizing the import of materials from other places. Wood wood trusses and wood shapers are fabricated from local coconut lumber which are sourced from matured coconut trees felled by the recent Typhoon Yolanda.

**GREEN LIVING WALL**  
A natural "green wall" constructed from structural steel mesh is incorporated in the design to act as thermal and wind buffer at both ends of the building. The climbing plants are those of species locally available in the region.

**NATURAL VENTILATION SYSTEM WITH OPERABLE JALOUSIE WINDOWS**  
Passive ventilation is obtained through the use of jalousie windows. This type of fenestration offers much of ventilation and natural lighting without taking much of the space in comparison to windows like casement or awning.



**after the storm & quake... the Super School is still standing.**

ONE-STORY 2- CLASSROOM BUILDING ONE-STORY 2- CLASSROOM BUILDING

Roofing to accommodate live load of people on roof in extreme emergency

Trusses and roof structures properly anchored to roof beam/panel loads transferred to foundation

Minimal roof overhang

Suspended sun shading, isolated from structure

Cong. hollow block wall fully filled and reinforced

Landslide beam to system wind impact to building face

Gravel mulch to building perimeter for better drainage and ground / building isolation

Heavy gauge long span metal roofing

Closely spaced purlins at both ends of roofing with bend around perimeter

Notched brace to soften and de-pressurized wind speed upon impact

Wind deflect / sun breaker

Wind lateral load transfer beam

Sloping window shutter for high wind pressure

Elevated floor slab level at 1.20 meter above ground

Underground support columns

Pad footing with tie beams on seismic base isolator

BACKFILL NOT SHOWN FOR CLARITY

UNITED ARCHITECTS OF THE PHILIPPINES  
BRITISH COLUMBIA CHAPTER

DESIGNER:  
JOE B. LARANO, JR.  
Architect AIBC, MRAC, LEED AP, UAP

PROTOTYPE DESIGN  
Disaster Resilient Classroom Building for the Philippines

EXCAVATION

CONC. BLINDING

FOOTING & THE BEAMS

COLUING & BACKFILLING

GROUND BEAMS

SUPERSTRUCURE

ROOF & TRUSSES

ARCHITECTURE SYSTEM

# Current Undertakings

- A site inspection will be undertaken in Loon, Bohol for an earthquake-resilient Public Market and an Evacuation Center. Project is already with approved funding from the national government. Date of inspection and meeting with Mayor of Loon is on June 11, 2014. UAP-EA shall provide the technical assistance thru a conceptual design for the above projects with the local chapter, UAP Bohol Chapter preparing the working drawings.
- Finalize the UAP-EA Guidelines for Disaster-Resilient Designs and its illustrated version (comics style).

# Current Undertakings

- Proposed evacuation center-school building to be constructed by UAP-EA in Palo, Leyte.



- Estimated construction cost: **P2.5M or US\$ 58,000.00** (to be sourced from donations)
- With storm louvers, water cistern, solar panels for emergency power and satellite radio.
- Kitchen and toilets at center accessed from both rooms during typhoons. A storage area is provided above the toilet and kitchen areas.
- Working drawings are to be completed soon with assistance from the Association of Structural Engineers of the Philippines (ASEP)
- Target start of construction: July, 2014

# Concerns:

- Members of UAP-EA are all volunteers with no honorariums (unlike foreign humanitarian groups like EAF (Emergency Architects Foundation-France and the Architecture for Humanity (AfH) and other local foundations where volunteer work is a job).
- No full-time staff to coordinate all the works.
- One draftsman has been employed to do working drawings but no full-time supervising architect to coordinate work and attend to other regular weekly coordination meetings with the shelter group of the UN OCHA.

# DONATIONS

- UAP Chapters/Members:

<b>Manila Sta. Mesa</b>		<b>10,000.00</b>
<b>Barasoain</b>		<b>15,000.00</b>
<b>Camanava</b>		<b>6,400.00</b>
<b>QC-South Triangle</b>		<b>11,400.00</b>
<b>District A-5</b>		<b>10,000.00</b>
<b>Kuala Lumpur</b>		<b>110,203.07</b>
<b>Reginald Yanez</b>		<b>5,000.00</b>
<b>Nova Central</b>		<b>15,400.00</b>
<b>Southern California</b>	<b>US\$ 500.00</b>	
<b>Green Architecture Advocacy</b>		<b>66,500.00</b>
<b>Batangas</b>		<b>50,000.00</b>
<b>TOTAL</b>	<b>US\$ 500.00</b>	<b>PhP 299,903.07</b>

# Donations

- **ARCASIA:**

<b>KIRA</b>		<b>US\$ 11,004.24</b>
<b>KIRA</b>		<b>US\$ 4,997.00</b>
<b>SRI LANKA</b>	<b>PhP 129,918.90</b>	
<b>ALACE</b>		<b>US\$ 985.00</b>
<b>ARCASIA-PEI ING</b>		<b>US\$ 2,963.00</b>
<b>ASA</b>		<b>US\$ 3,995.00</b>
<b>SIA</b>		<b>US\$ 32,881.84</b>
<b>NEPAL</b>		<b>US\$ 3,000.00</b>
<b>TOTAL</b>	<b>PhP 129,918.90</b>	<b>US\$ 59,826.08</b>