Vietnam suffers from a relentless cycle of floods, landslides, earthquakes, and more. Because much of the country’s housing stock is poorly constructed—and unsanctioned—the natural disasters destroy thousands of families’ homes every year.

To minimize the risk of destruction, Hanoi-based H&P Architects developed the Blooming Bamboo House, a residential housing model that utilizes local materials and can be built by laypeople at a low cost.

The 62-square-meter (670-square-foot) prototype is the first structure in Vietnam to be built almost entirely out of bamboo, according to H&P principal Doan Thanh Ha. The material’s high tensile strength enables the house to withstand strong winds and earthquakes, while a foundation of salvaged plastic drums will allow it to endure floods of up to 1.5 meters (4.9 feet).

Bamboo poles ranging in diameter from 8 to 10 centimeters are tied or bolted together to create the building frame, followed by smaller lengths that are tied onto the walls or lined on the floors as finishes, and sealed with bitumen to prevent water infiltration. The house can also be finished with other local materials, such as wooden planks, coconut leaves, plastic sheets, and bottles.

With an open floor plan and simple structural system, the house is designed to be built in modules of square rooms quickly and inexpensively; the prototype was built in just 25 days for $2,500, and accommodates six residents. Owners can adapt and expand their homes to include porches and veranda windows. Along with its storm resistance, the house’s cubic shape and pitched roof establish an eye-catching vernacular that alludes to the traditional homes of the region.

Juror Mic Patterson called the house “a reminder of what can be realized with indigenous materials and building practices sensitively handled.” —N.B.
Jury

Mic Patterson is founding principal of Los Angeles–based Design Tectonics, a consultancy that focuses on innovative façade technology applications and research. He was formerly the vice president of strategic development at Enclos. Patterson is a Ph.D. candidate in the University of Southern California School of Architecture with a focus on sustainable façade renovation practices.

Douglas Stockman, AIA, is a founding principal at El Dorado in Kansas City, Mo. He also serves on the Kansas State University College of Architecture, Planning, and Design Dean’s Advisory Council, and is chair of the Downtown Council of Kansas City. Stockman received a B.Arch. from Kansas State University.

Elizabeth Whittaker, AIA, is founder and principal of Merge Architects in Boston. In 2015, she was a recipient of the AIA Young Architects Award and the Emerging Voices award from the Architectural League of New York. Whittaker received an M.Arch. from the Harvard Graduate School of Design, where she is an assistant professor in the practice of architecture.

Credits

Cricket Shelter: Modular Edible Insect Farm, page 112
Design Firm: Tereform ONE, Brooklyn, N.Y. · Mitchell Joachim, AIA, (co-founder and primary investigator); Jiachen Xu, Lissette Olivares, Cheto Castellano, Ivan Fuenzalida, Sung Moon, Kamila Varello, Yucel Guven, Chloe Byrne, Miguel Lantigua-Inoa, AIA, Alex Colard, Melanie Fessel, Maria Aiellova, AIA, Vivian Kuan (project management); Felipe Molina, Matthew Tarpley (research assistants)
Consultant: Seek Food · Robyn Shapiro
Fabricators: Shandor Hassan, Christian Hamrick
Funding: Art Works for Change; Tereform ONE
Photography: Mitchell Joachim, Matthew Tarpley
Special Thanks: David Stewart, Christian Hubert, Heather Lord, Scott Pobiner, New Lab, Brooklyn Navy Yard, GMD Shipyard, New York University Gallatin School of Individualized Study

BayArc: A Tidal Responsive Barrier, page 16
Design Firm: Skidmore, Owings & Merrill, San Francisco · Craig Hartman, FAIA (concept and interdisciplinary leader); Mark Schwettmann, AIA, Alex Cruz, Ross Findly, David Kwon (project team)
Project Adviser: Moffatt & Nichol
Drawings: Skidmore, Owings & Merrill
Structural Engineer: Mark Sarkisian, Eric Long, David Shook, Geoffrey Brunn
Marine Engineering Concept: Moffatt & Nichol · Dilip Trivedi, Richard Dornhelm

The Tower at PNC Plaza, page 116
Design Firm: Gensler, San Francisco · Doug Gensler, AIA (principal-in-charge); Hao Ko, AIA (principal and architectural design director); Benedict Tranl, AIA (principal and technical director); L. Adams, AIA (project manager); Anastasia Huggins, AIA, David Hall, Gunwook Nam, Alison Wilkinson, AIA, Daniel Nauman, AIA, Jorge Barrero, AIA, Ethel Macleod, Eugene Lee, Joe Chisholm, Brent Van Gunten, AIA, Len Sciarra, Philip Kaefer, AIA, Joel McCullough, AIA, Rich Peake, Mariana Vaida, Jessica Yin, Yooju No (project team)
Rendering: Space Matrix; Tangram 3DS
Construction Manager: P. Dick
Lighting Designer: Fisher Marantz Stone
Structural and M/E/P Engineer: BuroHappold
Sustainability Consultant: Paladino & Co.
Photography: Connie Zhou Photography

LELU Exit Sign, page 122
Client: Architectural Safety Components
Design Firm: Interloop—Architecture, Houston · Mark Wamble, Dawn Finley, AIA (design principals); Eric Hughes, Peter Muesig, Jack Mussett (project team)
Project Adviser: Architectural Safety Components · Sam Youdal
Consultant: Martin Co. · John Martin
Fabricators: Moore Fabrication · Kerry Krumbeck; Professionalized Products and Services · Jerry Huang; Southwest Electronic Energy Group · Alex Marin; Anodizing Graphics of Houston · Linda Sayers
Special Thanks: Underwriters Laboratories · Abdul Ahad (investigating engineer)

Tally, page 124
Design Firm: KieranTimberlake, Philadelphia · Roderick Bates, Stephanie Carlisle, Billie Faircloth, AIA, Elizabeth Friedlander, AIA, Ryan Welch (project team)
Development Partners: Autodesk; Thinkstep (previously PE International)
Project Team: Autodesk · Jonathan Rowe; Thinkstep · Heather Gaddioni, Nick Santero, Maggie Wildnauer
Special Thanks: Emma Stewart, Jacky Liang

Pulled Plaster Panels, page 128
Design Firm: Young Projects, New York · Bryan Young, AIA (principal); Jon Cielo, AIA (project architect); Noah Marciniak, Samantha Eby, Nayoung Kim (project team)
Lighting Designer: Architectural Lighting · Rick Shaver
Structural Engineer: Silman · Nat Oppenheimer

Electrical Engineer: Engineering Solutions · John Ryan
Consultants: Butter and Eggs · Judy Dunne (interiors); Tacon (general contractor);
Engineering Solutions · John Ryan (M/E/P engineering)
Drawings: Young Projects
Fabricators: Kammetal (stainless steel screen); Balmer Architectural Mouldings
Photography: Young Projects and Jon Cielo

Chicago Horizon, page 130
Client: Chicago Architecture Biennial, Chicago Park District
Design Firm: Ultramoderne, Providence, R.I. · Yasmin Vobis, Aaron Forrest, AIA, Emily Yen, Assoc. AIA, Tida Oosotsapa, Will Gant, Hua Gao, Ronak Hingash (project team)
Design Structural Engineer: Guy Nordstrom and Associates · Brett Schneider
Structural Engineer of Record: Thornton Tomasetti
Architect of Record: Animate Architecture · Joe Lambke
Fabricator: Nordic Structures
Funding: BP; Chicago Park District; Chicago Architecture Biennial; Rhode Island School of Design, ReThink Wood; Nordic Structures
Photography: Naho Kubota
Special Thanks: Laura Briggs

Spray-On House, page 132
Design Firm: Patrick Tighe Architecture, Los Angeles · Patrick Tighe, FAIA, Zachary Teixera, Evelina Saussina, Assoc. AIA, Risa Tsutsuki, Brian Arfin (project team)
Structural Engineer: Neus Engineering · Matt Melnyk
Consultant: Demilec
Fabricator: Machinework
Life-Cycle Assessment: Department of Civil and Environmental Engineering, School of Engineering, Stanford University
Prototype: Built at Southern California Institute of Architecture (SCI-Arc), as part of the SCI-Arc Gallery Series
Drawings, Renderings, and Photography: Courtesy Patrick Tighe Architecture
Special Thanks: SCI-Arc