ONE UNIVERSITY ONE VILLAGE 一專一村

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1U1V Work @ Kassel documenta fifteen

Kassel Documenta was founded in 1955. It takes place every five years in Kassel, Germany. Alongside the São Paulo Art Biennial and the Venice Biennale, it is considered to be one of the most important comtemporary art exhibitions in the world. Ruangrupa (Jakarta-based artists) from Indonesia is appointed as curator of the fifteenth edition of documenta (18 Jun – 25 Sep 2022, Kassel) and invites community-oriented collectives, organizations and institutions from around the work to practice lumbung with each other work on new models of sustainability and collective practices of sharing.

The rammed earth technique is a form of construction that has been widespread in China and many parts of the world. This technique has successfully addressed the issue of sustainable human activity and ecological diversity in dwelling in environmentally complex areas. After the 13th Shanghai Biennale in 2021, 1U1V team was once again invited to give lecture for the "Water System School Workshop" organized by lumbung artists Cao Minghao and Chen Jianjun in this documenta. The team shared their extensive knowledge of the new rammed earth technology developed from post-disaster reconstruction practices and discussed how this technology to respond to today's global climate change, industrial technology development, disasters, political and economic related connections. In this exhibition project, the team shared the soil test result for an earthquake site in Wenchuan, earth construction documentation and earth project video etc in order to respond to the artists' proposal that "anywhere and any single details of such project can make further discussion and exploration on environment issues."

Click here for more details:https://documenta-fifteen.de/en/calendar/water-system-school-workshop-1-rammed-earth-techniques/

(Images in this page are provided by Cao Minghao and Chen Jianjun. Photo: Cao Minghao and Yao Huizi)

Our Projects

Site Location: **Gaoliangdi Village, Xiyang Township, Jinning District, Kunming City, Yunnan**

Project Nature: Earth Building (Whole Village Rebuilding Plan)

Teams: CUHK & Kunming University of Science and Technology

Project Duration: Oct 2018 – Jan 2023

Although the project was delayed due to the issues such as land use, change of regional development plan, the team restarted the construction work in mid 2022 after proactive coordination by the local government and layout design work finalized by the designers.

The team from Prof Zhai of Kunming University of Science and Technology is responsible for the architectural design. According to the current material cost, budget and villagers' feedbacks, two-storey house form was finally adopted. After several discussions with the villagers, three design layouts were confirmed.

Site formation work was completed in 2021. In early 2022, the construction team completed foundation work for 20 households. Construction work for two demonstration houses commenced in Jun and expected to be completed in mid Sep. Subsequently, the construction work for the rest of about 40 houses will begin. The entire project is expected to be completed in Jan 2023.

Final design layouts:

90m^2

120 m^2

150 m^2

Site Location: **Daheixin Village, Xiyang Township, Jinning District, Kunming City, Yunnan**

Project Nature: Earth Building

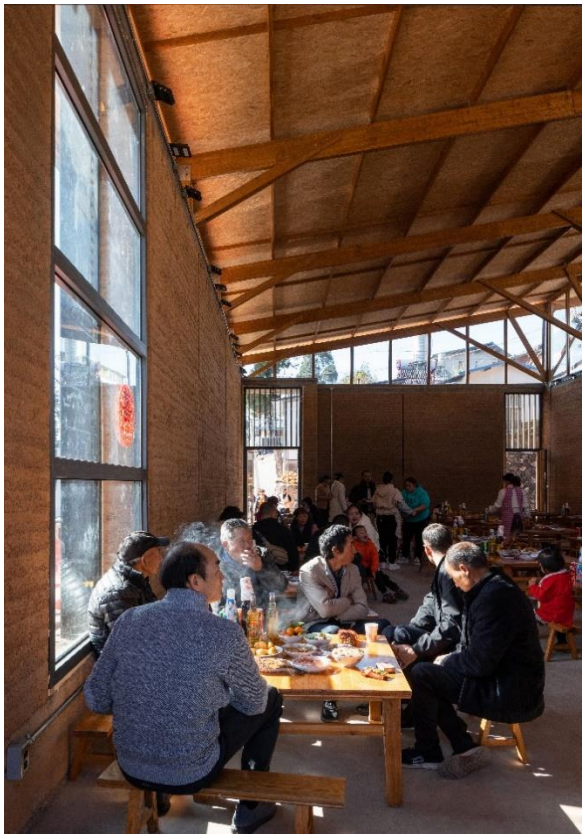
Teams: CUHK & Kunming University of Science and Technology

Project Duration: Jun 2019 – Aug 2021

This community hall building is the first pilot anti-seismic pure earth construction project conducted by the team. The newly designed community hall which sits on the site of the former community hall. The building comprises the outdoor space, the hall, and the kitchen. Its circulation spaces and layouts are based on the villagers' lifestyle and the design of the original community hall.

The building walls are made of local materials and constructed with pure rammed earth. In order to improve its seismic performance, the earth is appropriately mixed with sand and gravel according to soil particle size analysis. No chemical additives such as cement or other stabilizers was added to the wall. Therefore, the wall materials can be easily recycled or returned back to nature. Due to the low viscosity of local raw earth, H-steel columns are used for the load-bearing structure. The frame structure is integrated with steel columns, concrete foundation, ground ring beam, and top ring beam to ensure the building seismic safety. To meet the project requirements on span, daylighting, durability, and aesthetics etc., the roof truss adopts bamboo steel structure. Raw earth and bamboo with lower embodied energy and carbon emission combined with passive designs such asnatural daylighting and ventilation, thermal mass wall, etc., it ensures a very low environmental load in the entire life cycle of the building.

The project was completed in the end of Aug by a female construction team led by Ms Dong Yixiang. Once the hall completed, the villagers held a wedding ceremony and they all praised this newly built public space. Please click here for more details: https://mp.weixin.qq.com/s/vRvk6OFsPF9aRKVEWOFdXg



(Photo: Wang Ce)

Site Location: **Xinshan Village, Xiyang Township, Jinning County, Kunming City, Yunnan**

Project Nature: Earth Building

Teams: CUHK & Kunming University of Science and Technology

Project Duration: Aug 2020 – Dec 2021

Since the 1st investigation in Aug 2020, the Xinshan Village project took almost half a year to finalize the design layout plan, confirmed the construction mode with local contractors, and signed the relevant cooperation agreements. This project was not only a continuation of the construction mode of Dabaiyi project, but also an attempt to adopt a new construction organization model and the market exploration of new seismic rammed earth construction technology. The project officially entered the construction stage in Apr 2021. It took 178 days for the main structural work and its interior and landscape work was carried out during the rainy season. Due to the slight delay caused by the epidemic and climate reasons, the entire project was officially completed on 11 Dec 2021.

Xiao Xiyang Village：

Jiu Village

Yadadian Village：

Site Location: **Badi Village, Jinjiang Town, Shangri-La City, Yunnan**

Project Nature: Earth Building

Teams: CUHK & Kunming University of Science and Technology

Project Duration: Dec 2020 – Sep 2022

Since Nov 2020, the team visited the village and introduced the new seismic rammed-earth construction technology to the villagers. Total 17 households decided to join the rebuilding programme and took the craftsman training to learn how to build their houses by such construction technology.

The project was mainly designed by the villagers and adopted local traditional construction method by using local materials to fit their living habits. The team was responsible for providing equipment tools, technical support and incentives to the villagers who were trained and engaged in the entire construction process. Currently, 14 houses have been built and 3 houses are under renovation work.

Site Location: **Baipoxiang, Miyi County, Panzhihua City, Sichuan**

Project Nature: Earth Building

Teams: CUHK & Kunming University of Science and Technology

Project Duration: May 2022 – Jan 2023

Since 2019, the team has rebuilt over 16 rammed earth rural houses to solve the housing needs of the local villagers in Miyi County and improve their living quality. In May 2022, the team started a new project in Baipoxiang to build another 8 rammed earth houses. The main construction work is targeted to complete by Jan 2023.

Site Location: **Malongxiang and Panlianzhen, Miyi County, Panzhihua City, Sichuan**

Project Nature: Earth Building

Teams: CUHK & Kunming University of Science and Technology

Project Duration: Nov 2021 – Jul 2022

In late Oct 2021, the Housing and Urban-Rural Development Bureau of Miyi County invited the team to inspect three project sites in the county. The team organized the villagers of Panlianzhen to visit Hetaoping Village. Afterward, they conducted household surveys and introduced briefly the anti-seismic rammed earth construction technology and general cooperation models to the villagers whose housing plans and willingness were also exchanged. Finally, the team decided to demonstrate the construction of such anti-seismic rammed-earth houses to the local villagers in Malongxiang and Panlianzhen.

In early Dec 2021, the team selected 9 households (3 from Malongxiang and 6 from Panlianzhen) to carry out rebuilding project. At present, this project has been successfully completed with acceptance.

Site Location: **Wamaxiang, Baoshan City, Yunnan**

Project Nature: Earth Building

Teams: CUHK, Kunming University of Science and Technology & local contractor

Project Duration: Dec 2021 – Nov 2022

Wamaxiang is a relatively poor township under the jurisdiction of Baoshan City, mainly of Yi and Miao minorities. The project site is a Miao village located in a remote mountainous area with poor road conditions. 8 households as the first batch enrolled to join the rebuilding plan.

At present, 4 households have completed construction and awaiting for acceptance. However, 4 original registered households withdrew from the plan due to personal reasons. Later, the team discussed with the local government and changed to build a collective housing for difficult households to resettle at least 4 households. Recently, the ramming work for the 1st floor of this resettlement house has been completed, and it is expected to be completed in mid-Oct 2022.

Collective Housing：

Terra Centre (The Research and Development Centre for Rural Revitalisation in Yunnan)

In the past year, the team carried out volunteer activities, craftsman training, scientific research and experiment of earth construction technology in Terra Centre (Centre) in orderly manner. The original plan for international academic exchanges and academic salons was suspended due to repeated epidemics. However, the team also actively participated in various social and school activities. More than 100 pieces from Terra Centre were displayed in the exhibition themed “Fields of Being: Traditions of Yunnan Architecture” held in Contemporary Gallery Kunming from Apr to Jun 2022. In addition, 2022 graduation shows of undergraduate and postgraduate Architecture students of Kunming University of Science and Technology and the music festival organized by School of Architecture and Urban Planning were also held in the Centre.

Planning Ahead

Earth building projects:

The team will keep to launch more rural building projects in Shangri-La City and Xuanwei City of Kunming and Miyi County of Sichuan and do more investigation for the areas of Ruoergai County, Sichuan and Ningde City, Fujian.

1U1V Work Base:

The team plans to develop work bases in the areas of Sichuan, Fujian etc in order to connect the local people and establish a long-term network with various local groups and organizations for better promotion of rural revitalization and sustainable development work to the surrounding areas.

Promotion & Publicity

Seminars & Forums:

Dr Wan Li and Dr Chi Xinan were invited to participate in the following seminars, forums and academic activities:

- REEDCOB 4th international summer school
- Seminar titled “湧現：四種類型建築師的在地實踐 organized by UED Magazine
- Seminar organized by Sino-Canada Culture and Arts Foundation
- The 5th Symposium on Architectural Anthropology
- Sino-Japanese forum themed "Living Together - Social Design and Artistic Action
- Forum themed “Future Community” organized by The Research Institute of Beautiful China Initiative of China Academy of Art

In addition, they also accepted the exclusive interviews with the media such as UED Magazine, 空白藝論, 借宿, etc to introduce 1U1V work, research methods and concepts.

Awards: The Terra Centre project was received the following overseas and local awards:

- HKIA Annual Awards 2021 - HKIA Merit Award outside Hong Kong - Institutional Building & Special Architectural Award - Humanity & Social Inclusion
- Green Building Award 2021 - Special Citation on UN Sustainable Development Goals Green Building Award 2021
- TERRAFIBRA Award 2021 - Winner in the "Public Cultural Equipment" category
- DFA Design for Asia Awards 2021 - Silver Award

Exhibitions:

1U1V team was invited by the artists, Cao Minghao and Chen JIanjun to take part in their workshop held in Kassel documenta fifteen. Apart from this, the team also participated in the documenta themed "Living Together - Social Design and Artistic Action" in Chongqing (Apr 2022), the exhibition themed “Fields of Being: Traditions of Yunnan Architecture” held in Contemporary Gallery Kunming (Apr – Jun 2022), and The HKIA Annual Awards 2021 Exhibition in Hong Kong (May 2022).

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