



From
the People of Japan



Multi-Purpose Evacuation Shelters in Lao PDR

Designing for resilience and livelihood

Architecture Competition for
Japanese and Lao students and
professors/professionals

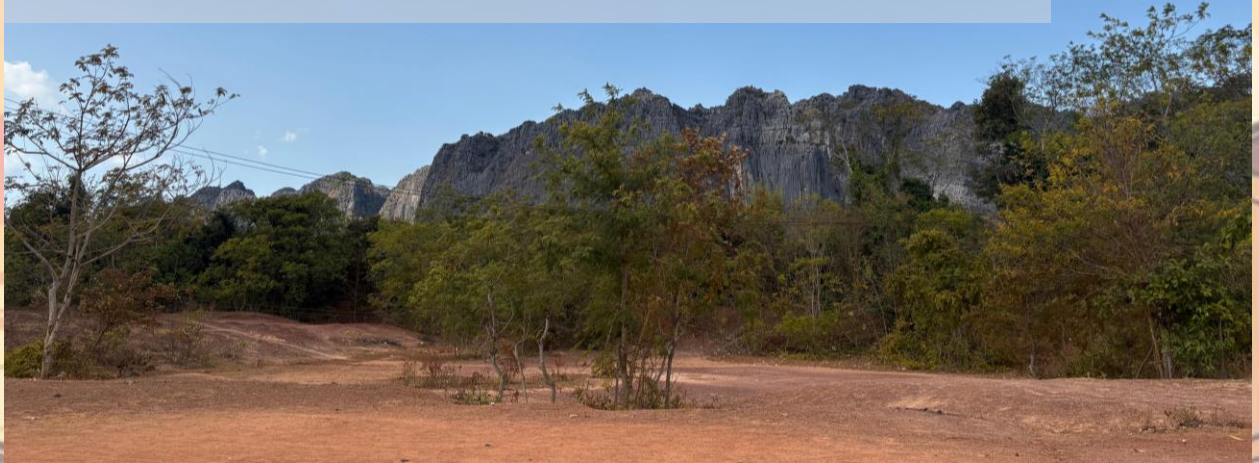
Organized by:
UNDP, Ministry of Labour and Social Welfare

In partnership with:
ALACE, National University of Laos

Funded by: Government of Japan

Contact: Korakot Tanseri, Korakot.tanseri@undp.org (+8562059713920)

Introduction and background



Project: Strengthening Disaster Response through the Establishment of Evacuation Shelters project

The Lao People's Democratic Republic (Lao PDR) is significantly susceptible to flooding due to its geographical characteristics, with approximately 39.7% of the population exposed to flood risks, rendering it the sixth most flood-prone country in terms of population exposure. Ongoing financial constraints have impeded the government's capacity to respond to disasters, resulting in the isolation of remote communities during flood events, with women, children, the elderly, and individuals with disabilities being disproportionately affected.

- Prior to the crisis in 2022, the government had made advancements in disaster risk governance, which included the enactment of disaster management legislation and the adoption of the National Strategy on Disaster Risk Reduction for 2021-2030. Nonetheless, challenges such as inadequate funding, limited inter-agency coordination, and accessibility issues for non-governmental organizations continue to obstruct the effective implementation of policies.
- The project aims to enhance human security in flood-prone communities in the provinces of Khammouane, Saravane, and Champasack through inclusive designs that prioritize safety and privacy
- This competition aims to ideate and conceptualize a multi-purpose evacuation shelter that ensure and enhance community ownership, support the livelihood and resilience of the community and serve as a vital community hub in their daily life.
- The evacuation shelter should not be used only during emergency situations and should be more than a physical building. It is a place that give opportunities and space for the community to grow, meet, support each other. It is a shelter that will help the community to recover and a space to build a more resilient and sustainable future.
- This is an opportunity for Students and Professors/Professionals from Japan and Lao PDR to contribute through their creativity to this transformative initiative. The participants will also have the opportunity to collaborate with each other and learn from expert from diverse topic from Disaster Risk Reduction, Climate Chang to Sustainable architecture and Sustainable Development Goals.

Context



- Lao People's Democratic Republic (Lao PDR) is a landlocked country in Southeast Asia with a population of about 7 million. It borders Thailand, Vietnam, Cambodia, Myanmar, and China, and its total land area is approximately 236,800 KM². The Mekong River is a defining landscape feature, as 60% of its length runs through Lao PDR. The western border largely follows along the Mekong River, which is also the shelter for agricultural products due to the fertility of the river valleys.
- Lao PDR has a vast network of rivers and channels, with significant water discharges from the Mekong River and its tributaries, which are heavily laden with sediments. It also has a substantial portion of mountainous and forested areas, contributing to an increased risk of flash floods. The country also has a high degree of seasonal weather variability each year, including southwest monsoon. With its geographical location, land characteristics and monsoon climate, Lao PDR is highly vulnerable to natural hazards, particularly floods.
- About 39.7% of the population (2.99 people) are exposed to flood risks, making Lao PDR the 6th most flood-prone country by population exposure out of 188 countries). Flooding and landslides, in addition, incur a high risk of new exposure to ordnance (UXO) despite being already vulnerable to the contamination of UXO, with 25% of all villages in Lao PDR.
- The project aims to build 12 evacuation shelters in three provinces in central and southern— Khammoune, Champasak, and Saravanne, have a combined population of 1,483,017 (Khammouane: 392,052, Saravane: 396,942, Champasack: 694,023) according to the latest Census conducted in 2015), experience flood damage yearly from the Mekong River and its tributaries, such as the Xe Ban Fai and Xe Don Rivers. In 2022 and 2023, over 718 billion LAK (4.97 billion JPY) was lost from the damages caused by flooding in the three provinces.



The Competition

The site

- As the competition focuses on creating a replicable multi-purpose evacuation shelters to be built in 12 different locations, there is no specific site provided. However, the competition will bring the finalists to one of the location in Khammouane Province. The participants will work with a standard plot with no specific special orientation. This will ensure that all designs are comparable and evaluated under the same criteria.
- The plot covers an area of 4,800m², measuring 60m x 80m (rectangular), 1 floor building.
- The land is flat and suitable for construction. The land is in a level which is safe from flood and the main access from a dirt road that can be use all year long.
- The site is located on the outskirts of the community, less than 300m from the school and households
- Public water and electricity supplied will be available, however complementary systems should be designed as the access to water and electricity during emergencies might be jeopardized.



The Competition

- **Economical:** Constructing evacuation shelters requires substantial financial investment, however those shelters are used only during emergency situations. How can we innovate and make sure that the evacuation shelter can be used for other purpose and serve as a vital space for the community while ensuring that it can be functional during emergency situations?
- **Maintenance:** Community needs to ensure that the evacuation shelter is well-maintained and ready for use during emergencies can be difficult, especially in resource-limited settings. Regular upkeep and stocking of essential supplies are crucial but may not always be prioritized
- **Environmental and Cultural Considerations:** The design and construction of evacuation shelters must consider local environmental conditions and cultural sensitivities. For example, the shelters should be able to withstand natural disasters common to the area and be culturally appropriate for the communities they serve. The use of local construction material available in the region is encouraged.
- **Multi-purpose Use and Sustainability:** Since the shelters are used only during emergencies, there may be concerns about the sustainability and efficient use of resources. Innovative solutions, such as designing multi-purpose facilities that can serve community needs during non-emergency times, can help address this challenge.
- **Disaster-proof:** the evacuation shelter needs to withstand natural disasters, so safety and durability should be critical features for the design. The goal is to create a culturally appropriate, eco-friendly and resilient building that provide a safe and lively space for all people in the community.
- Collaboration with local authorities, communities, and the government is central to this project as the land for the evacuation shelters are provided the local authorities. Once the evacuation shelters are built, the local government will oversee operational aspects, such as assigning teachers and managing resources, ensuring these facilities become integral parts of their communities.



The Competition

- **Evacuation shelter**

The evacuation shelter should **accommodate 500 persons, including persons with disabilities**.

The design should have a proper space management, including designated areas for different activities and populations, can help maintain order and safety.

- **Core facilities:**

Shelter: Safe and secure spaces for evacuees to stay temporarily. This includes sleeping areas with adequate bedding and provisions for privacy, especially for vulnerable groups such as families with children, the elderly, and individuals with special needs.

Food and Water: Access to clean drinking water and nutritious food. This may involve setting up kitchen facilities.

Sanitation and Hygiene: Adequate sanitation facilities, including toilets, showers, and handwashing stations. Proper waste management systems should also be in place to maintain hygiene and prevent the spread of diseases.

Medical Care: A space and equipment to address any minor health issues that may arise during the evacuation period. This includes provisions for first aid and emergency medical care.

Recreational and Community Spaces: Areas designated for recreational activities, community gatherings, and educational programs to support the well-being and morale of evacuees. This space can be used during normal time for community shelter, educational facility, health and wellness service, sport and recreation, temporary shelter, training and drills, other functions as appropriate.

Logistics and Supplies: Storage and distribution systems for essential supplies such as clothing, blankets, personal hygiene items, and other necessities.

- **Future expansion**

The design must be modular to allow for additional facilities to be added as required. Participants may also propose additional spaces they believe would add value to the evacuation shelter, which could be considered for future construction phases.

- **Climate in Lao PDR**

Laos has a tropical climate influenced by the southeast monsoon, which brings significant rainfall and high humidity. The country experiences two main seasons:

Rainy Season (Monsoon): This season lasts from May to mid-October, bringing about 70% of the annual rainfall. During this period, daytime temperatures average around 29°C in the lowlands and 23°C in the mountain valleys. Humidity levels are high, and the countryside becomes lush and green.

Dry Season: The dry season extends from mid-October to April. It can be further divided into two periods:

- **Cool Dry Season:** From November to February, temperatures are relatively cooler, making it a popular time for tourists to visit.

- **Hot Dry Season:** From March to April, temperatures can reach up to 40°C, with April being the hottest month

Award



1st Prize

6,000USD + Construction

All winning projects and finalists will be published in UNDP and partners blogs, social networks and websites. All winning projects and finalists will receive a certificate of participation.

Eligibility

- The competition is open to Japanese and Lao students and professors/professional in architecture and other disciplines such as engineering, environmental science, sociology, design, etc.
- Teams must consist of three members, all of whom must be at least 18 years old.
- Each member needs to be able to communicate in English.
- Each team must have one professor/professional.
- Jurors, expert, coach and mentors, organizers or anyone directly related to them are not allowed to participate in this competition.
- **5 teams** from each country will be selected and matched with those from another country and work together during the in-person trip in Lao PDR. Lao and Japanese teams will be matched on their complement interest and qualifications.
- Finalist teams will be composed of Japanese + Lao students and professors/professionals.
- Team of 6 members (3 from Japan and 3 from Lao PDR).
- Diversity (gender/ethnic/etc.) is highly encouraged in team formulation.

3 members
Japan

+

3 members
Lao PDR

Team of
6 people

X 5 Teams = 30 participants
15 from Japan
15 from Lao PDR

Timeline

- **Call for Application** **2 April – 27 April**
 - Livestream – Q&A 21 April

- **Announcement of finalists** **30 April**

Training and coaching **5 May – 26 May**

- 2-half-day online training by organizers & partners 5 & 12 May
- Merging the team (total 5 teams Japanese+Lao) 15 May
- 2-half-day online mentoring session 19 & 26 May

Mission to Laos and pitching – transportation, meal and accommodation are fully covered by the organizer for Japanese and Lao finalists

- 2-day bootcamp in Khammuane Province 10-11 June
- Final preparation and coaching in Vientiane 12 June
- Final Pitching and award ceremony 13 June



Application and submission

The participants are required to submit their application via this link:

<https://forms.gle/fJWWYb1MFkqJKZ7f7>

The submission should comprise of:

- 1x A1 Board: Participants are required to present their project on one A1 format board (594x841 mm or 23.4x33.1 inches), which can be either landscape or portrait oriented. The board should contain visuals that contribute to better understand the project. A1 Board File Details: The board must be delivered in JPEG or JPG format with a maximum size of 10 MB.
- 2-A4 pages of Project Description in PDF format, of a maximum of 1,000 words, that should include but not limited to, project title, team members' short bio, description of the concept, description of the functionality, innovative approach, material use, cultural sensitivity and sustainability.
- Language: All texts, both on the A1 Board and in the A4 Project Description, must be written in English or Japanese.

Rules and Conditions

- Intellectual Property: Participants maintain the rights over the intellectual property of their submissions. However, by participating, they grant our platform a global, free, and non-exclusive license to reproduce, publish, and distribute the project in any format and through any dissemination medium. The organizer will make sure to give proper attribution to the project authors. The authors of the project selected to be constructed will give the organizer and the contractor the right to build it and modify it, if necessary, to adapt it to their actual needs.
- Use of Copyright-Free Images: Participants are responsible for ensuring that any images or materials used in their submissions are copyright-free. The organizer is not responsible for any copyright infringements made by participants.
- Changes to Competition Rules: The organizer reserves the right to change the competition rules at any time, in compliance with current legislation. Any modifications will be published on the website and will be binding for participants.
- Right to Cancel the Competition: Our organizer reserves the right to cancel the competition due to lack of enrollment or other justified reasons.
- Adherence to Terms and Conditions: Participants are required to adhere to the terms and conditions of the competition as stated on this information package. Failure to comply may result in disqualification.
- No Responsibility for Third-Party Use: The organizer is not responsible for the use of participants' submissions by third parties, including content that has been shared by third parties or indexed by search engines.