# Our Association's Role and Initiatives in Providing Emergency Temporary Housing



Japan Prefabricated Construction Suppliers and Manufacturers Association, Standards Building Committee



Yoshihiro Teramachi

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#### 1. Japan Prefabricated Construction Suppliers and Manufacturers Association



The Prefabricated Construction Association (hereinafter referred to as "Pre-Association") is an industry association established in January 1963 under the joint management of the Ministry of Construction and the Ministry of International Trade and Industry (at the time) as an organization that plays a central role in promoting the modernization and rationalization of construction production and developing the industrialization of housing.

Members: 217 companies (Regular members: 31 companies, Associate members: 71 companies, Supporting

members: 115 companies) as of March 31, 2025

Standards and Building Standards Committee: Regular members: 13 companies, Associate member: 1 company

Prefabricated Building
Association
All 47 prefectures nationwide
13 cities where rescue
operations were carried out
Disaster prevention agreement

Standards Building Committee,
Prefabricated Buildings
(Temporary Buildings)

Housing Division
Prefabricated housing, low-rise

PC Construction Committee Prefabricated housing/Midhigh rise Standards Public Relations
Subcommittee

Disaster Prevention Subcommittee

Unit House Subcommittee

Technology Development Subcommittee







### 2. Pre-Disaster agreements



"Agreement on the Construction of Temporary Housing in the Event of a Disaster" (Excerpt)

#### (Necessary Procedures)

#### **Article 3**

Party A (Prefectural Government), when requesting housing construction, shall notify Party B (Prefabricated Construction Suppliers and Manufacturers Association, "Pre-Kyo") in writing of the construction site, number of units, scale, start date, and other necessary matters. However, in urgent situations, notification may be made by telephone or other means. In such cases, Party A shall promptly submit the written request to Party B.

#### (Cooperation)

#### **Article 4**

When a request is made as specified in the preceding article, Party B shall cooperate with Party A to the extent possible, including arranging housing construction contractors who are members of Party B (hereinafter referred to as "Party C").

#### (Housing Construction)

#### **Article 5**

Party C (housing construction contractors arranged by Party B) shall construct housing based on the request from Party A.



"Agreement on the Construction of Temporary Housing in the Event of a Disaster" (Excerpt)

#### (Reporting)

#### **Article 8**

Party B shall report to Party A once a year regarding the status of its construction capacity and ability to cooperate in housing construction. However, if Party A deems it necessary, it may request Party B to submit additional reports at any time.

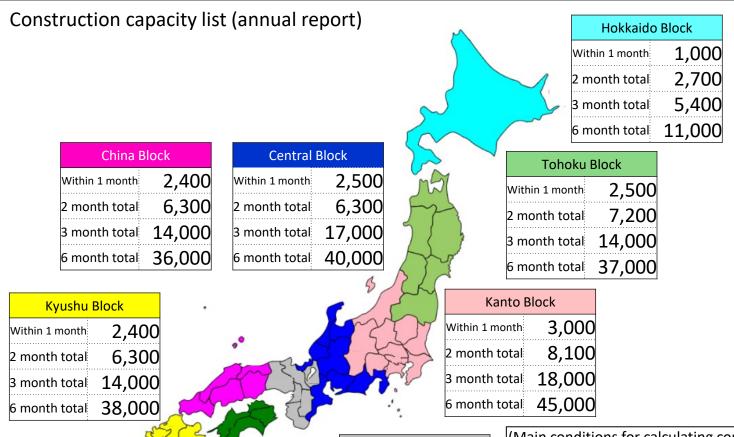
### (Provision of Membership List)

#### **Article 9**

Party B shall provide Party A with a list of its staff members responsible for matters related to this agreement, as well as a list of its member companies, once a year. If there are any changes in these members or companies, Party B shall report the changes to Party A.

#### 2. Pre-Disaster agreements (report contents)





Within 1 month

2 month total

3 month total

6 month total

2,500

7,200

18.000

42,000

Okinawa Block		
Within 1 month	400	
2 month total	1,800	
3 month total	2,700	

6 month total

Shikoku Block		
Within 1 month	1,800	
2 month total	5,400	
3 month total	9,000	
6 month total	32,000	

(Main conditions for calculating construction capacity)

•One week after accepting a request from the prefecture to build temporary housing

Calculated based on the condition that construction started within a certain period

The total number of houses constructed in each block is the national construction capacity.

This does not count as a household capacity.

- •Calculated based on standard specifications and standard plan for 9 tsubo type
- •There is no damage to business establishments or production plants due to disasters

#### 3. Main activities of the Prefab Association during normal times



- ① Visits and exchanges of opinions with prefectures and other entities that have signed agreements to build emergency temporary housing
  - In anticipation of a disaster, in order to rapidly and smoothly advance disaster response operations, the government is visiting prefectures and other local governments to exchange opinions on various issues and problems and to strengthen cooperation during normal times.
- **2** Participate in simulation and tabletop training on construction of temporary housing organized by prefectures
- 3 Support and cooperation for prefectural governments' advance preparation measures for the construction of emergency temporary housing
- <u>A Publication of the booklet of documents related to the construction of emergency temporary housing</u>
  - The construction capabilities of the Pre-Association regarding the construction of emergency temporary housing, prefectures, etc., and the respective roles of the Association and its member companies,
  - It lists important points for construction planning, major examples of emergency temporary housing that have been constructed to date, and annually reviews the Association's standard specifications and plans, and distributes them to prefectures, local governments, and other relevant organizations.
  - The provision of this document constitutes a "report" as stipulated in the "Agreement on the Construction of Emergency Temporary Housing in the Event of a Disaster."
- **⑤** Survey on supply capacity of materials and equipment for temporary housing
  - In order to ensure the construction capacity for emergency temporary housing, we visit material and equipment suppliers every year to check the supply status of materials and equipment and exchange opinions about future production, etc.

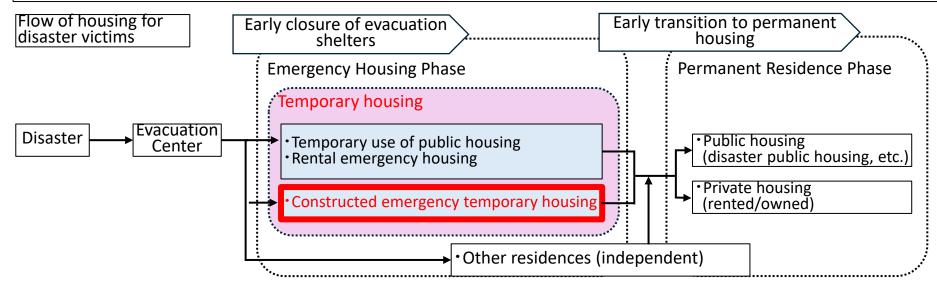
#### 4. What is emergency temporary housing?



OPart of rescue efforts based on the Disaster Relief Act.

OPeople whose homes have been completely destroyed, burned down, or washed away by natural disasters such as earthquakes, tsunamis, typhoons, and floods, and who no longer have a place to live their daily lives.

For those who have lost their homes and are unable to secure housing on their own, the national and local governments will provide housing free of charge. Temporary housing facilities provided for a certain period of time.



Life in evacuation shelters (Public facilities such as community centers, assembly halls, schools, etc.)

- Problems with ensuring privacy (Mental burden)
- Increasing damage caused by economy class syndrome (Physical burden)



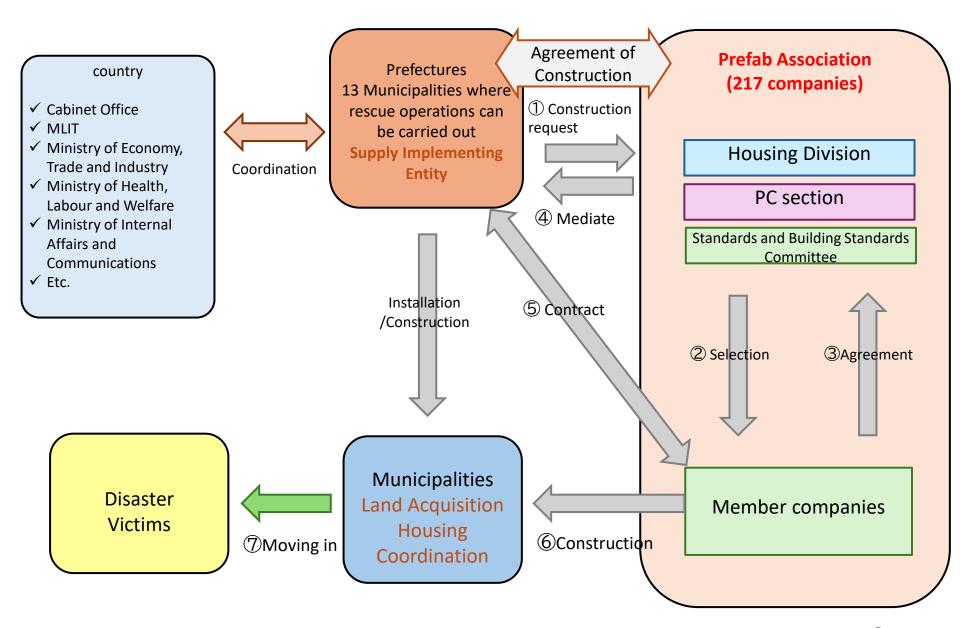


Evacuation shelter for the 2024 Noto Peninsula earthquake
Image source: Status of evacuation shelter management during the Noto Peninsula earthquake in 2024 |
Cabinet Office (Disaster Prevention Division) (External link/PDF)

In the event of a large-scale disaster, it is important to provide temporary housing early, as victims are likely to remain in evacuation shelters for long periods of time.

### 5. Supply scheme of constructed emergency temporary housing





#### 6. Flow of preparation of constructed emergency temporary housing (1) Communication and construction system construction Member Prefab-Started contacting affected prefectures Pref. Disaster occurs ompani Assoc. Confirmation of damage status and construction capacity of member company offices, and construction system construction Consultation and construction policy confirmation Communication and construction system ✓ Confirmation of the number of temporary housing units required for construction, Pre-0 construction Housing Association reports on construction capacity ✓ Confirmation of mutual construction and communication systems Confirmation of layout plan policy and determination of technical standards Consultation and construction policy $\bigcirc$ Consideration of layout and exterior plans, etc. $\bigcirc$ confirmation Sharing information on the schedule for the entire process of constructing temporary (3) Site survey in the Construction site From the Prefectural governments request the Pre-Housing Association to investigate potential sites Construction site survey disaster to the for building temporary housing The prefectural association will report the results of the site survey and the proposed layout start of plan to the prefecture. construction Prefectures and municipalities will decide on the construction site and number of houses to Survey of candidate sites and $\bigcirc$ $\bigcirc$ be built based on the report. Within 20 report submission 4 Construction request/mediation and creation/approval days of layout plan Construction site and number of 0 0 Construction requests from prefectures to the Pre-Construction Association units decided The day after the request, the prefectural association introduced its member companies to The member company that was introduced will hold a meeting with the prefecture and decide on the construction site. Construction request/mediation 0 Create a layout plan Member companies submit layout plans to the prefectures, and after approval by the 4 Submit quotation and enter into contract (amount is decided at this stage) Member companies submit a schedule and begin construction after confirming the site. 0 Creation and approval of layout plan Starting construction and completing the project The construction of temporary housing will be completed in about one month from the start of construction. Municipalities will recruit residents, hold lotteries, hold information sessions for residents, Start of work/construction 0 0 0 and prepare relief supplies. (5) 6 Demolition, removal and restoration (in case of a lease agreement) After the lease contract ends, the member companies will begin dismantling the temporary 0 Completion and delivery housing. Among the body parts, usable parts will be repaired and reused. The restoration work on the site will be carried out by the member company, prefecture, and municipality at the time of contract. Dismantling, removal and $\bigcirc$ Construction will commence after reviewing the details of the discussions between the two restoration parties. Steps 3 to 5 are repeated many times until the last house is completed.

# 7. Construction of emergency temporary housing for the Noto Peninsula earthquake 🍙 プレハブ建築協会



structure	Prefab	wooden	
overview	Supply quickly and in large quantities, Quickly end evacuation phase	By positioning it as city-owned housing, It is possible to be shifted its status to a permanent home	
Tenancy Period	In principle, for two years (extendable depending on situation of the )	In principle, for a period of two years (with specifications allowing conversion to municipal housing after two years)	
place	Lots allocated by Municipality, Playground in the School	Close to the settlement living before disaster	
Exterior	Tenement house (Contemporary type) Misakicho Daiichi Housing Complex (Suzu City)	Tenement house (Community-Oriented type)  Mitsuimachi Daiichi Housing Complex (Wajima City)	Detached house style (Hometown-Return Type)  Shimokaragawa Second Housing Complex (Anamizu Town
Number of houses constructed	5,565 units (Of which, 4,467 are pre- association units)	1,570 units	33 units

(Source: Ishikawa Prefecture website)

7. Construction of emergency temporary housing for the Noto Peninsula earthquake 🍙 プレハブ建築協会 1K (19.8m) 3K (39.6m) Windbreak Room **Windbreak Room Entrance Entrance** Wase room Wase room Room **Kitchen Bath** Kitchen/ **Bath** Room Room 物入 Storage Room Nure-en (Veranda) Nure-en (Veranda) Wheelchair Accessible 2K (29.8m) 2DK (39.6m) Windbreak Room Windbreak Room **Entrance Toilet Entrance** Wase room Storage **Kitchen Kitchen** Wase room **Bath** Room Room Room Room **Bath** 

Nure-en (Veranda)

Nure-en (Veranda)

# 7. Construction of emergency temporary housing for the Noto Peninsula earthquake 🍙 プレハブ建築協会











# 7 Construction of emergency temporary housing for the Noto Peninsula earthquake 🎧 プレハブ建築協会



(Living room)



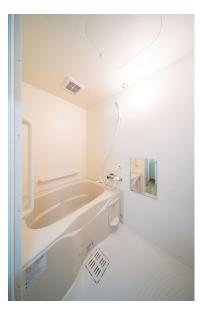
(Kitchen)



(Sliding window and wet veranda)



(Washroom)



(Shower room)



(Bathroom) 13





(Water Tank)

(Septic tank)

# 7. Construction of emergency temporary housing for the Noto Peninsula earthquake 🍙 プレハブ建築協会













#### Prefectures

### Visit and exchange of opinions

- ✓ Increase in visit frequency
- Prior consultation on construction policy
- Exchange of opinions at candidate sites

# Cooperation in preparedness and response operations

- ✓ Layout planning work
- ✓ Response to inquiries regarding preparation of manuals

### Participation in tabletop exercises, etc.

- ✓ Mock training, desk training
- Training sessions, information sessions, etc.

### (Preparation for disaster prevention measures)

- ✓ Revise construction and management manual
- Publication of construction-related documents (annual)
- ✓ Confirmation of supply capacity of organizations related to materials and equipment

#### (Strengthening the construction system)

- ✓ Tabletop training
- ✓ Implementation of local response training
- ✓ Participate in activities of local member companies

# (Consider shortening construction period and labor)

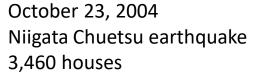
- ✓ Use of digital transformation technology (GNSS surveying of the site, etc.)
- ✓ Remote survey of potential construction sites
- Create layout plans using an automated program

#### (Utilization of cloud data)

- ✓ Accumulation of past construction data
- ✓ Construction manual (technical data)
- ✓ Various study materials



January 17, 1995 Great Hanshin-Awaji Earthquake 33,906 houses



July 16, 2007 Niigata Prefecture Chuetsu Offshore Earthquake 1,222 houses





March 11, 2011 Great East Japan Earthquake 43,233 households

April 14, 2016 Kumamoto earthquake 3,605 houses

January 1, 2024 2024 Noto Peninsula Earthquake 4,467 houses







Construction of emergency housing from 1983 to 2024: 45 disasters, 32 prefectures, 95,584 units