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## The “Community-based Disaster Reduction: Map Simulation” Program Local Disaster Reduction Activities Utilizing Large Neighborhood Maps

### Japan IV

#### *Japanese Consumers’ Co-operative Union*

##### – Background

The Japanese Consumers’ Co-operative Union (JCCU) is a nationwide association of domestic cooperative unions. Joined by 612 cooperative unions with a total of 25,320,000 individual members (as of March 2009), the JCCU is the largest consumer and civil organization in Japan.

So far, total sales of all the cooperative unions in Japan amounted to 3,411.4 billion yen (including sales from institutions, the medical industry, universities, and mutual aid cooperative unions). In particular, regional cooperative unions posted sales of 1,036.5 billion yen in retailing and 1,607.5 billion yen in non-store retailing (e.g., joint purchasing and home delivery services). These figures show that sales from non-store retailing accounts for more than 60% of the total sales of the regional cooperative unions, which is attributable to the rapid growth of home delivery services.

The Great Hanshin-Awaji Earthquake, which occurred in January 1995 and caused 6,434 fatalities, is known as the most destructive earthquake to ever directly hit a large urban area. In the wake of this earthquake, cooperative unions from all over Japan sent a total of 10,000 people and 3,000 vehicles to the affected area for disaster relief, and such activities drew considerable attention from society, to the extent that the mass media reported: “Cooperative Unions Make Impressive Contribution to the Earthquake-Stricken Area.” Before the occurrence of the earthquake, the Consumer Cooperative Kobe (Co-op Kobe), a member of the JCCU, had signed a commodity supply contract with seven municipalities, including Kobe City. Under the contract, Co-op Kobe, in response to requests from the government, began supplying emergency commodities for everyday needs immediately after the earthquake, even though many of its own stores and offices were also completely destroyed or severely damaged. Thus, the quick action taken by Co-op Kobe was highly praised as one of the factors that prevented public panic for fear of shortage of necessary supplies.

Returning from relief activities, Japanese cooperative unions began working on concluding the “Agreement on the Supply of Emergency Commodities for Everyday Needs upon Occurrence of a Disaster” with respective local municipalities. As of October 2009, 45 prefectures, out of Japan’s total of 47 prefectures, along with 299 municipalities all over Japan, have become parties to this agreement.

The JCCU is also under the “Agreement on the Prioritized Supply of Commodities upon Occurrence of a Disaster,” which covers 249 items with 78 suppliers. This agreement enables the JCCU to immediately meet the requests of government for the supply of commodities any time a disaster strikes.

Of course, disasters can damage retail stores, rendering it impossible to obtain emergency commodities for everyday needs. Therefore, in order to help affected people return to their normal, everyday life, it is necessary, among other things, to ensure that retail stores resume their operation at an early stage. Japanese cooperative unions are covered by a mutual assistance plan, under which cooperative unions in non-affected areas offer assistance to affected cooperative unions to help them resume their operations as soon as possible.

In addition, a map exercise is conducted annually to ensure that the wide-area network of the cooperative unions will work in case of the occurrence of a major urban earthquake, such as the “Tokai Earthquake,” which is anticipated to occur in the near future. Officials of the Cabinet Office and local municipalities responsible for disaster reduction measures are invited to join the exercise and offer advice from various angles.

In the wake of the Niigata Chuetsu Earthquake in 2004, the Noto Hanto Earthquake in 2007, and the Niigata Chuetsu Offshore Earthquake in 2007, cooperative unions all over Japan launched various relief activities

utilizing their organizational strengths and infrastructure in response to the request of government and disaster volunteer centers. Such activities include: supplying commodities for everyday needs; preparing and distributing hot meals in the affected areas; delivering relief goods and helping people moving to temporary housing by vehicles usually used for their non-store retailing operation; and raising money for earthquake victims. The Japanese cooperative unions are also active internationally. For example, they asked their individual members to make monetary contributions for the victims of the Sumatra Earthquake and Tsunami that occurred in 2005 for a one-year period, and raised 432 million yen, which was donated to the affected countries through UNICEF.

While Japanese cooperative unions have been promoting disaster prevention and reduction measures as shown above, it has become apparent that individual members are poorly prepared for earthquakes. In fact, many members fell victim to the Noto Hanto Earthquake and the Niigata Chuetsu Offshore Earthquake and had to evacuate to shelters or relatives' homes in safe areas. Additionally, questionnaire surveys conducted among individual members of each cooperative union revealed that they are insufficiently prepared for disasters.

Against this backdrop, the JCCU recognized that it had the important responsibility of taking disaster reduction measures to protect its individual members, and thus launched a workshop-type program titled, "Community-based Disaster Reduction: Map Simulation."

– **Objective**

In implementing this program, the JCCU aims to: increase awareness, among program participants, of the necessity of taking measures to protect their lives when an earthquake hits, including enhancing the earthquake resistance of their homes and securing furniture to prevent toppling, and of the importance of mutual assistance and cooperation with neighbors in preparing the local community for and responding to disasters. Furthermore, the JCCU also seeks to deepen program participant understanding of the disaster reduction measures in place in their community and encourage them to better prepare for disasters at home and on a community-wide basis.

– **Term/Time frame**

This program was started by one of the JCCU's member cooperative unions in Chiba Prefecture in 2004, and the program achieved such fruitful results that the JCCU decided that it was worth promoting nationwide. Thus, the JCCU worked for standardization of the program and development of the tools necessary for implementation of the program during 2007, which the JCCS designated as the year of preparations for the nationwide promotion of the program.

During that year, a model program was implemented in Tokyo (at five locations), Ichikawa City in Chiba Prefecture, Kyoto City, and Sendai City (at two locations). When held in Kyoto City on October 31, Sendai City on November 6, and Tachikawa City in Tokyo on December 5, the program was organized jointly by the Cabinet Office (Disaster Management) and the JCCS. In addition, Kyoto prefectural and municipal governments, and the Miyagi prefectural and Sendai municipal governments backed the program when it was held in Kyoto City and Sendai City, respectively.

Beginning from 2008, the JCCU has been working for full implementation of the program nationwide.

– **Activities undertaken**

The "Community-based Disaster Reduction: Map Simulation" Program is a workshop designed to educate the residents of a particular community through the use of a large neighborhood map.

In the first part of the program, a facilitator reads a scenario that describes an earthquake occurring while the participants are at home. Then, the facilitator instructs the participants to write in a memo what state they are supposed to be in and what action they are supposed to take three minutes, 30 minutes, and three hours after the earthquake, and to read the memo in front of the other participants. Most participants will write: "I will check the damage to my house," "I will contact my family members," "I will evacuate to a shelter," and other actions they think they will take. After some participants read their memos, the facilitator asks questions, such as: "You seem to take it for granted that you are alive after the earthquake, but will you really survive the earthquake?"

Are you sure you won't be injured? Have you enhanced the earthquake resistance of your house? Have you secured your furniture in advance? Are you sure you are sleeping safely, without the danger of being crushed under a large piece of furniture?" The facilitator then tells the participants that more than 80% of the fatalities during the Hanshin-Awaji Earthquake were caused by being crushed to death by collapsing homes or falling furniture, and this makes the participants keenly aware of the necessity to prepare themselves for earthquakes at home on a routine basis, in order to minimize damage.

In the next stage, all the participants engage in group work to mark on a map the locations of evacuation shelters, fire stations, hospitals, and other facilities important for disaster reduction, and in doing so, learn about the disaster reduction facilities and systems in place in their neighborhood. The participants are also asked to mark, on a neighborhood map, the locations of heightened danger, as well as the homes of people who might especially be vulnerable to disaster, including elderly people living alone, people with disabilities, expectant mothers, infants, and those from foreign countries.

When the map is completed, the facilitator again paints a picture of an earthquake occurring and causing damage to various parts of the neighborhood, indicating the locations where fire broke out, roads sagged, liquefaction occurred, and buildings collapsed, while the participants mark the locations as they are indicated and describe the damage on the map. Once the map is filled out, the participants are instructed to evacuate from their houses to the designated shelters on the map, leaving their footprints behind. After all the participants have evacuated, the facilitator asks questions such as: "Did you evacuate to a shelter alone?" and "Have any of you taken notice of those elderly and people with disabilities, and encouraged them or taken them to a shelter?" Usually, most of the participants have evacuated alone, without paying heed to the elderly, people with disabilities or expectant mothers, whose houses are marked on the map. Then, the facilitator tells the participants that in the Great Hanshin-Awaji Earthquake, far more lives were saved by neighbors than by policemen, firefighters, Self Defense Force members, and the personnel of other public organizations, and this makes the participants aware of the importance of mutual support among neighbors.

In this way, this program is elaborately designed to enable participants to gain the disaster management knowledge necessary to protect lives when hit by an earthquake while at home. Participants also develop an understanding of the importance of self-help efforts and mutual support as they go through a simulated experience of being hit by an earthquake and evacuating to a shelter for survival.

– **Major achievements**

Characteristically, this program adopts a workshop-style participatory approach, not a one-way lecture-style approach, which allows a group of participants living in the same community to share ideas and opinions. Such an approach has proven highly effective in helping participants gain many important insights, making them aware that the threat of an earthquake is their own personal problem.

The following are some of the feedback given by participants in this program:

- "I realized that I had been poorly prepared for an earthquake."
- "I became aware of the importance of talking with my family members concerning the emergency measures to be taken and enhancing the earthquake resistance of my house, securing furniture, and keeping a stock of necessary items to be taken out when hit by an earthquake."
- "I now know the necessity of developing friendly ties with neighbors on a routine basis so that I can act in cooperation with neighbors in case of an emergency."



Participants check the locations of disaster reduction facilities on a large map of their neighborhood.  
Photo by: Kaoru Kameyama

As these comments indicate, the program has achieved meaningful results.

Participants not only commented on the program itself, but also declared their determination to work positively for reducing disaster risks and presented specific actions they would take, including talking with their family members about emergency measures, moving furniture to a safer place so that they would be able to sleep safely without the danger of being crushed under it, and sharing what they learned in this program with their neighbors.

In promoting this program, we worked in cooperation with the Cabinet Office (Disaster Management) at the beginning, with the backings of local municipalities, which is another characteristic of this program.

During 2008, cooperative ties with local fire stations and local voluntary disaster reduction groups were newly developed, which further expanded the scope of the program. Recently, cooperative unions are often asked to cooperate with neighborhood associations in carrying out disaster reduction activities and to assist schools in conducting disaster education after school hours.

Through such efforts, participants are beginning to recognize the significance of revitalizing local communities, and we think this is one of the most important achievements of this program. Mutual assistance and cooperation among neighbors in different aspects of daily living are a long-held Japanese tradition, but today, as is the case in other developed nations, community ties are weakening as a result of urbanization and the declining population of rural areas. This makes it increasingly difficult for community members to act in cooperation in times of emergency. The revival of communities in which neighbors help one another through this program is consistent with the principles of cooperative unions.

– **Total budget**

This program can be implemented with a small budget. While the major expenditure is the cost to rent a room, we can save this cost by using a meeting room of a local public hall or citizens’ center, which may be offered for free or at a considerably low cost given that the program is intended for “community-wide disaster reduction.”

The large neighborhood maps to be used in the program can be produced by borrowing residential area maps from a library and copying them. Thus, all we have to pay is the small cost of copying.

Stationery necessary for the program include whiteboard markers, color labels (round stickers), sticky notes, and pens—all of which cost a low amount of money.

The JCCU recognizes that producing many facilitators of this program will be the key to the successful promotion of the program. This is because there are many cases where cooperative union members who participated in this program organize a similar workshop in their local communities where they share what they were taught with neighbors, serving as facilitators themselves. The JCCU produced a facilitator manual at its own expense and distributed tens of thousands of copies so far. The manual is offered at ¥300 per copy, excluding tax, upon request to the publisher, Coop Shuppan Co., Ltd. (TEL: 03-5778-8183). (The actual shipping cost will be added to the invoice. Acceptance of a large quantity order is subject to prior negotiation.)

– **Contact details**

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Facilitator manual