

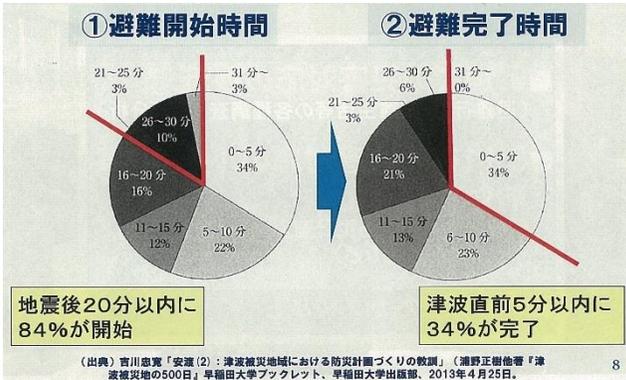
Developing a Disaster Management Plan by Accumulating Lessons of Disaster in a Bottom-Up Manner, and Repeatedly Verifying the Plan by Conducting Drills

<p>Region</p>	<p>Ando District, Otsuchi Town, Iwate Prefecture</p>	<p>Important Aspects to Realize “Better Reconstruction”</p>	<p>Soft Measures, such as Evacuation Drills, etc.</p>
<p>Overview of Efforts</p>	<ul style="list-style-type: none"> In order to improve the disaster management ability of the district, residents were interviewed in detail on the damages caused by the earthquake and tsunami at the time of Great East Japan Earthquake, as well as on their evacuation behaviors. By reflecting lessons learned from the earthquake, a disaster management plan for the district was developed. Furthermore, based on the district disaster management plan, a comprehensive disaster management drill is voluntarily conducted. By repeatedly conducting drills and verifying the plan, efforts are made to refine the plan and to prevent people from forgetting the lessons learned. Iwate Prefecture and Otsuchi Town are also cooperating for the drill. In particular, Iwate Prefecture supports the Ando District in verifying the district disaster management plan, by mobilizing helicopters for drills. 		
<p>Points of Efforts</p>	<ol style="list-style-type: none"> Developing a “Disaster Management Plan with Ongoing Relevance” by Accumulating Lessons of Disaster in a Bottom-Up Manner <ul style="list-style-type: none"> What is really needed in the reconstruction process are soft measures to improve disaster management abilities. With the awareness that in the traditional “reconstruction”, structures were built and communities were destroyed, a district disaster management plan was developed by reviewing district disaster prevention methods in the process of reconstruction and by verifying emergency responses at the time of disaster. An approach was taken so that the people in the district realized problems, by starting to share the lessons learned from the disaster among themselves and by discussing issues found in the emergency evacuation at the time of Great East Japan Earthquake. Almost all of the people in the district had a sense of duty to “pass on their disaster experiences to the next generations”, while they were suffering from the severe psychological trauma from the disaster. Every discussion lasted 4 hours, and a questionnaire achieved a high response rate. Developing a Plan Where Images of Changing Statuses by the Disaster Can Be Shared in a Time Series <ul style="list-style-type: none"> In materializing the plan, attention was paid to make people imagine “what will happen in a disaster” in a time series. Especially, those which could realistically present images of disaster sites and minds of victims were sought. In Otsuchi Town, about 40 out of 100 and more officers headed to rescue people in need of help lost their lives. With this tragedy in mind, a provision on “withdrawal” was incorporated in a disaster management plan for the first time, in order to mitigate the damage. The reason why the provision was incorporated in the plan was because local residents could image changing statuses by a disaster based on their own experiences, and the plan was developed by considering the balance between “self-help” and “mutual aid”. 	<p>Major Events</p> <p>March 11, 2011 Great East Japan Earthquake occurred. 218 persons (11.2% of the population) died of the tsunami.</p> <p>April 1, 2012 By integrating three neighborhood associations within the district, Ando Neighborhood Association established. Development of District Disaster Management Plan started.</p> <p>FY 2012-13 Discussion meetings held 11 times. Plan briefing to the town mayor, social gathering with the residents, and a survey on residents opinions carried out.</p> <p>Oct. 2013 Tsunami Disaster Management Plan of Ando District developed.</p> <p>Report on “Tsunami Disaster Management Plan of Ando District” to Town Mayor</p> 	

Source: Cabinet Office of Japan, provided document

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Analysis of Evacuation Behavior by Questionnaire, etc.



避難開始が遅れた理由

- 想定外(浸水範囲): 49%
- まだ時間がある: 31%

	度数	相対比率
津波が来るまでに、まだ時間があったから	30	31%
地震発生時にいた場所まで津波が来るとは思わなかったから(想定外)	48	49%
大切な人(家族・親戚・従業員など)の安否確認を行ったから	9	9%
大切なモノ(防寒着・薬・携帯電話・財布・車・ペットなど)を取りに戻ったから	5	5%
家族に要援護者がいたから(避難が困難だった)	7	7%
要援護者の安否確認や避難誘導などを手伝いに行ったから	4	4%
道路が渋滞していたから	11	11%
その他	21	22%
合計	135	139%
全回答者数	97	100%

(出典) 吉川忠寛「安達(2)：津波被災地域における防災計画づくりの教訓」(浦野正樹他著「津波被災地の500日」早稲田大学ブックレット、早稲田大学出版部、2013年4月25日。)

Source: Cabinet Office of Japan, provided documents

Rules of Evacuation Behavior (Source: Tsunami Disaster Management Plan of Ando District, Oct. 2013 Edition)

(1) Immediately After Earthquake to 10 Minutes

<Delay in Evacuation, Evacuation Belief>

- Residents make their own family evacuation plans and evacuation drills, so that they can take safe routes and head for safe evacuation sites with their own decisions, without being caught by assumptions.
- Neighborhood associations (NAs) further promote "self-help", to eliminate the "unexpected delay to escape".
- NAs develop procedures for evacuation (support) behavior under strict conditions to eliminate the "unexpected delay to escape".

<Trigger for Evacuation>

- Residents notify people in the surrounding, while evacuating first.
- NAs promote making triggers for evacuation (evacuating first, notifying people in the surrounding, etc.) through disaster management education, etc.
- NAs request development of transmission means for disaster information, etc. to the Administration.

(2) Until Tsunami Arrival

<Evacuation by Car>

- NAs permit "evacuation by car" under certain conditions and decide their rules by consultation.
- NAs request the Administration to develop evacuation routes and sites meeting the conditions set in Item 7. At the same, NAs develop evacuation plans in accordance with facility development.

<Support to People in Need of Help in Event of a Disaster>

- NAs determine basic duties (evacuating first, notifying people in the surrounding, management of evacuation centers, etc.) related to support to people in need of help, and conditions for cases where support is provided beyond the basic duties.
- Family members of a person in need of help conduct a certain degree of self-help activities, e.g. preparation of necessary transportation means, participation in evacuation drills, etc.

<Going Down to Lowland>

- Residents discuss and decide on evacuation methods (e.g. meeting place) of their own families in advance, so that they do not return to lowland. After an earthquake, each person makes a best possible evacuation in a given situation, by separately evacuating with "tsunami tendenko".
- At evacuation sites, NAs prevent people from going down to lowland.

Comprehensive Disaster Management Drill Based on District Disaster Management Plan



Source: Cabinet Office of Japan, provided documents