

How Persons with Special Needs at times of Disaster (PSND) were Responded to during 2007 March Noto Peninsula Earthquake

Feb. 14th, 2008

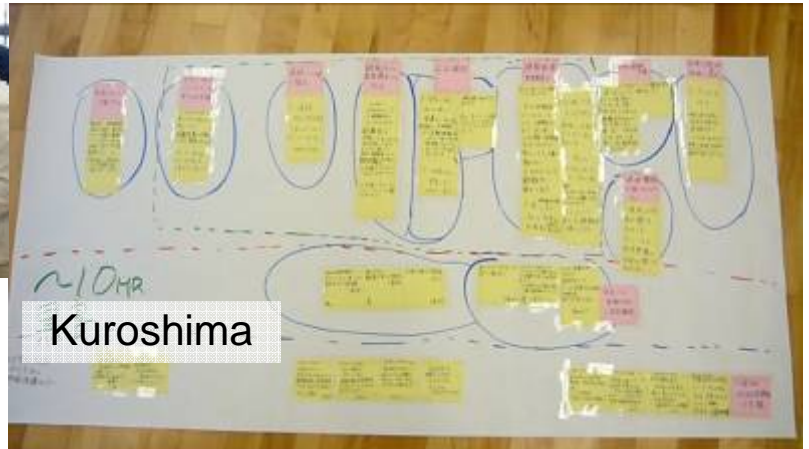
Department of Sociology
Doshisha University
Shigeo TATSUKI
(www.tatsuki.org/)

Assessment Workshops on Responses to Noto Peninsula EQ Disaster for PSND's

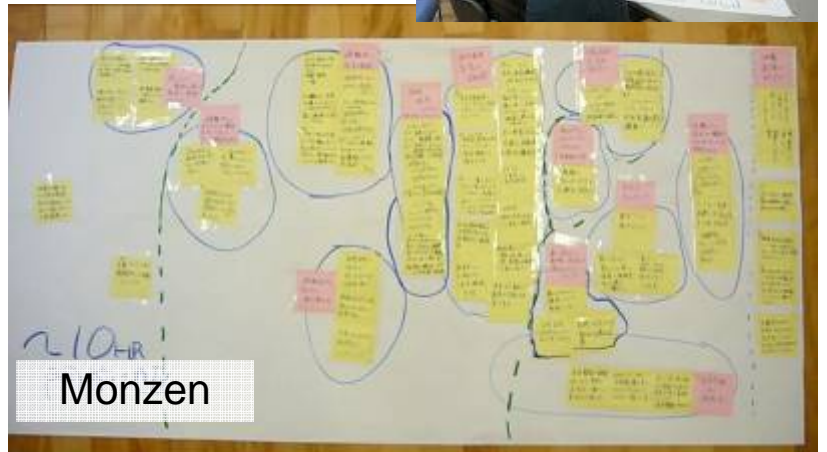
- | | |
|--|--|
| <ul style="list-style-type: none"> • PHN's & City Dpt. Care Managers
(7 Personels, Monzen Branch, May 15, 2007) | 2007/May

~
Aug

75
Participants |
| <ul style="list-style-type: none"> • Presidents of Neighborhood Assoc., District Welfare Commissioner, Community Center Personnel, Volunteer Fire Fighter Chiefs (Moro-Oka Area (4 participants, Moro-Oka, May 15, 2007) | |
| <ul style="list-style-type: none"> • Presidents of Neighborhood Assoc., District Welfare Commissioner
(8 participants, Kawarada, May 20th) | |
| <ul style="list-style-type: none"> • District Welfare Commissioner, DWC assistant volunteers (Monzen, & Kuroshima District)
(10 participants at Monzen Public Health Center, May 21st) | |
| <ul style="list-style-type: none"> • Long-term Care Service Care Manager Meeting
(20 Participants, Wajima City Local Health Center, May 21st) | |
| <ul style="list-style-type: none"> • Community Center Personnel
(6 Participants, Monzen Branch Office, June 6th) • City Office Department Personnels (EOC, Monzen Branch, Wajima Headquarters)
(19 participants, at Monzen Public Health Center, August 8) | |
| <ul style="list-style-type: none"> • Individual Interviews to PSND's & Their Families (10 participants at Monzen, To-ge & Moro-Oka Tem. Housing Projects, August 9th) | |



Community (Morooka, Kuroshima, Monzen) Response during the March 25 2007 Noto Peninsula Earthquake



Community Residents (Morooka, Kuroshima, Monzen)

Response (N=281)

Placards that were used during the October 2006 disaster drill were kept around the evacuation area, using it made checking attendance of community residents possible. (Morooka)

"I don't want to be to move to the shelter because I cannot use the toilet there," said the elderly with weak legs who was urged to move to the shelter.

10~100 Hours
(76 cards)

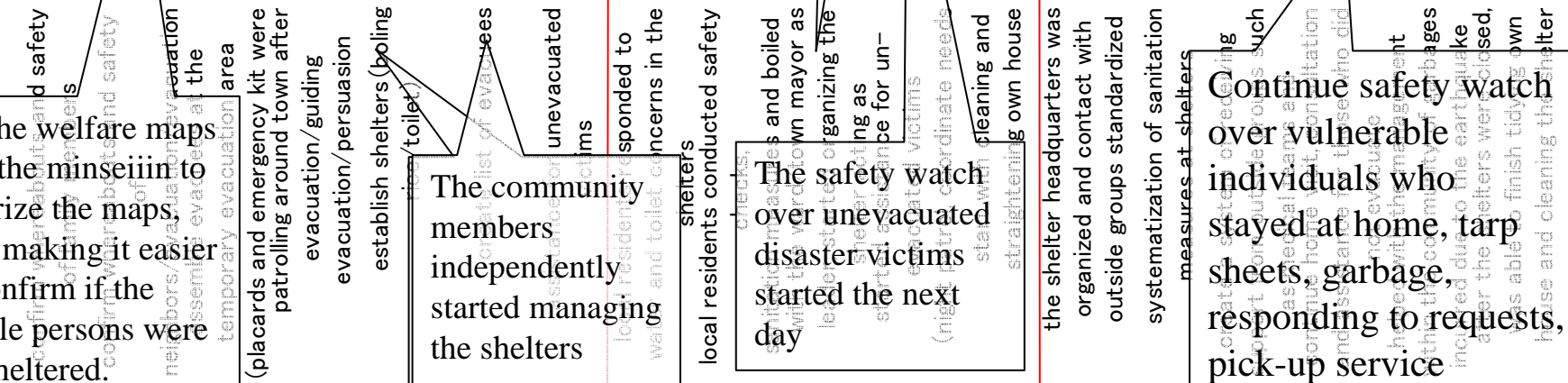
Elderly persons were afraid to use the portable toilettes

The shelter established its system of self-governance

Gargle, hand wash, thorough ventilation, separate eating and sleeping quarters, quarantine infected patients, persons in charge of toilets are not allowed inside the kitchen

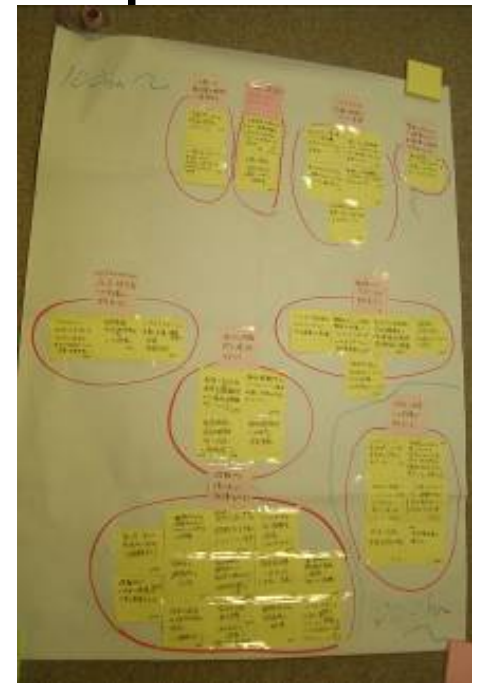
Smooth reception of aid because of the self-governance in the shelters were well-established

0
5
10
15
20
25
30
35
40
45
50

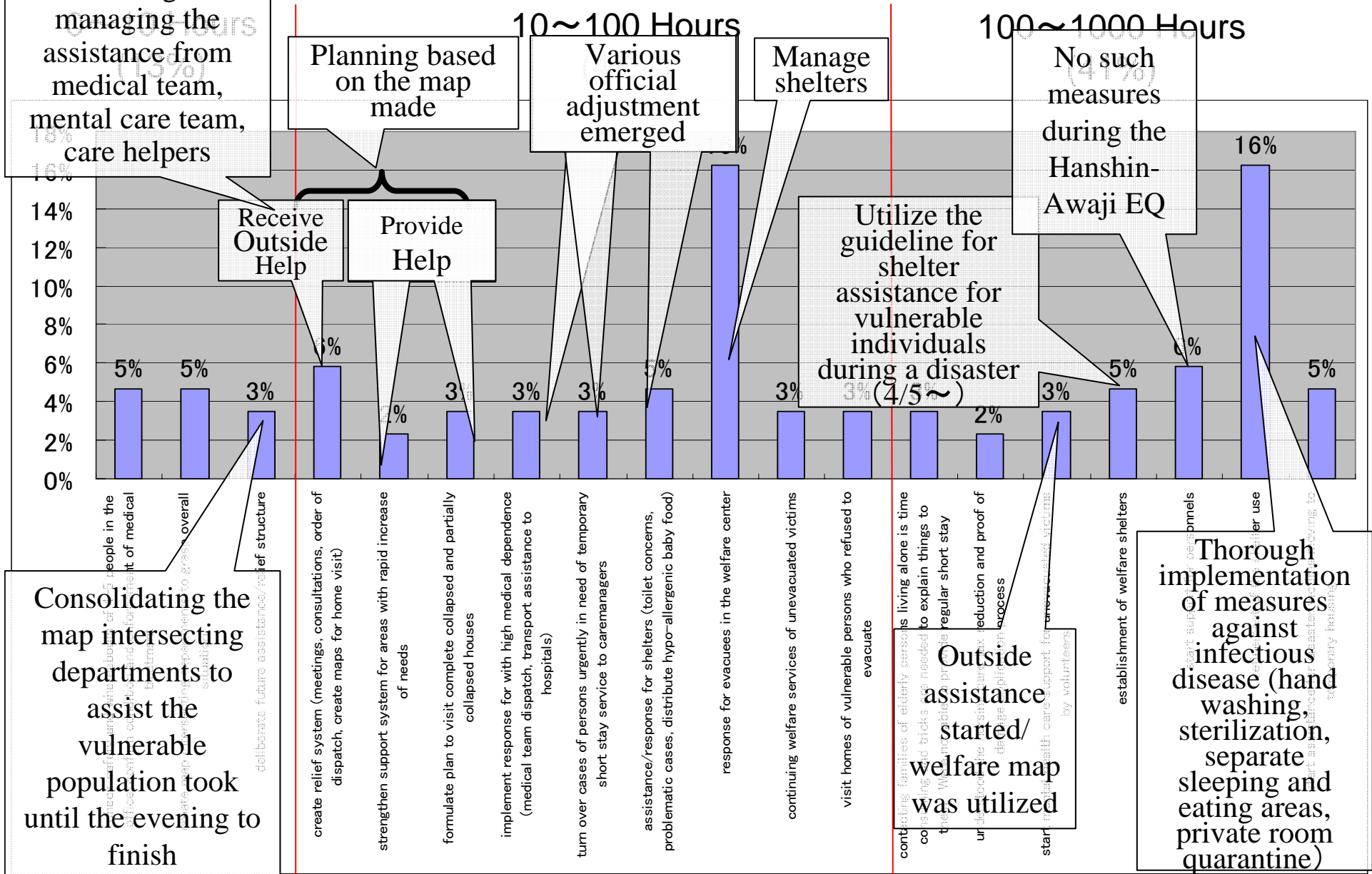




Government's (Departments in charge of Vulnerable Individuals) Response during the March 25 2007 Noto Peninsula Earthquake

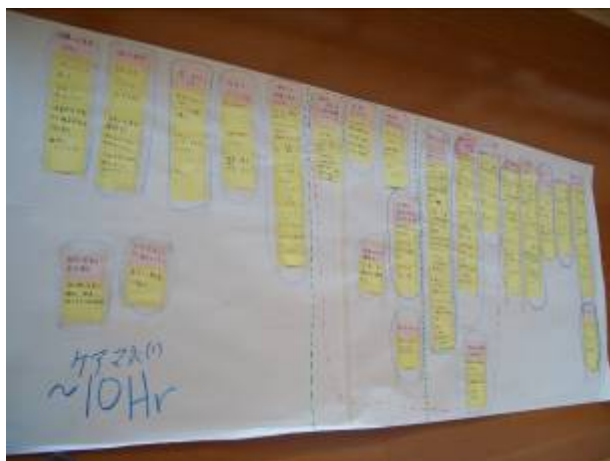


Vulnerable Individuals (N=86)

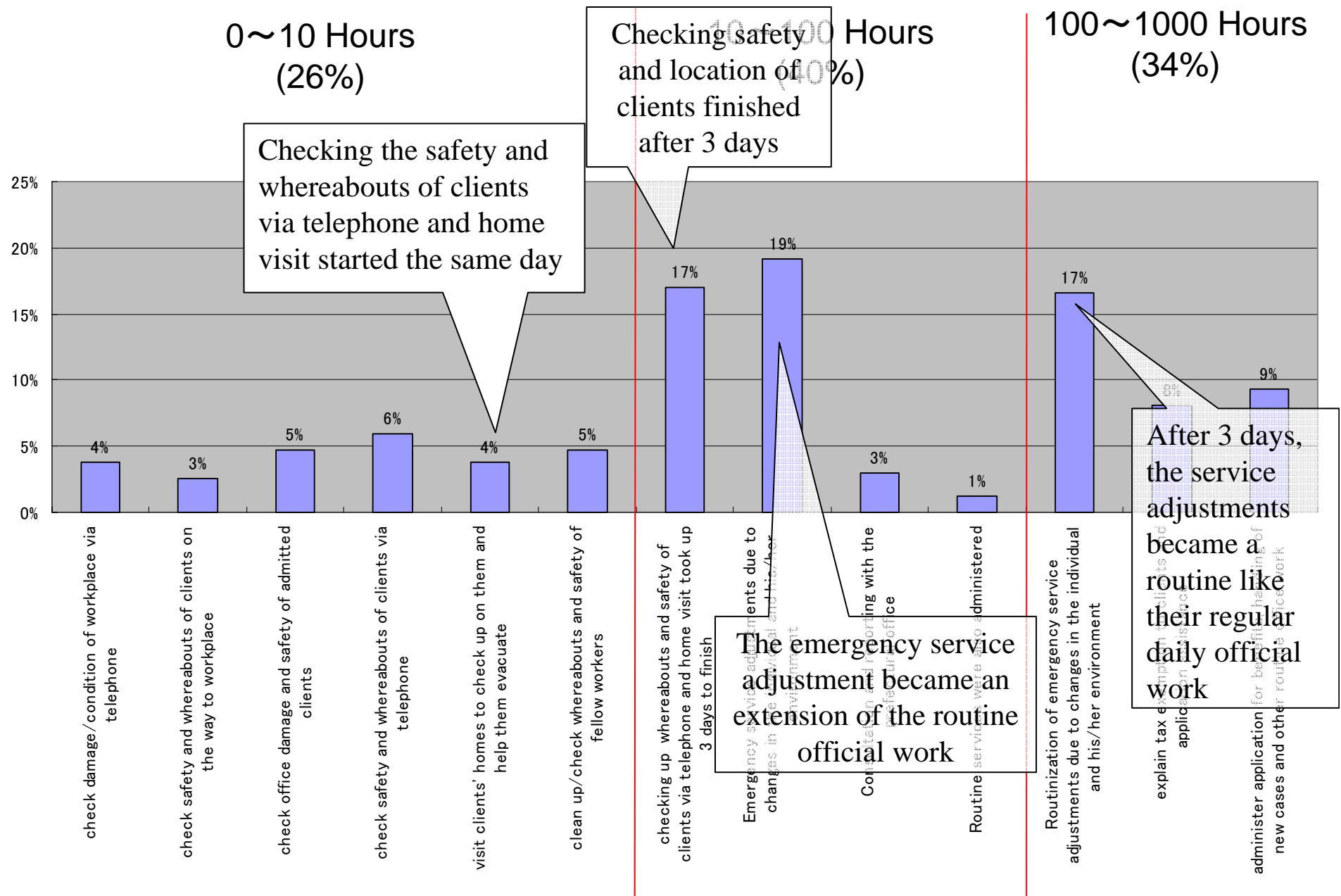




Long-Term Care Service (LTCS) Care Managers' Response during the March 25 2007 Noto Peninsula Earthquake



Response of Care Managers (N=235)



Who did What ?

0 to 10hr, 10hr to 100hr, 100 to 1000hr
Disaster Phase Analysis

DRC Framework to Analyze Organizational Response to Disaster

Tasks

Org.
Structure

	Routine	Nonroutine
Same as Predisaster	Type I Established	Type III Extending
New	Type II Expanding	Type IV Emergent

Source: Quarantelli, E.L. What is a Disaster? NY:Routledge, 1998, p.115.

Organizational Response to Disaster

Community Response: 0~10hr

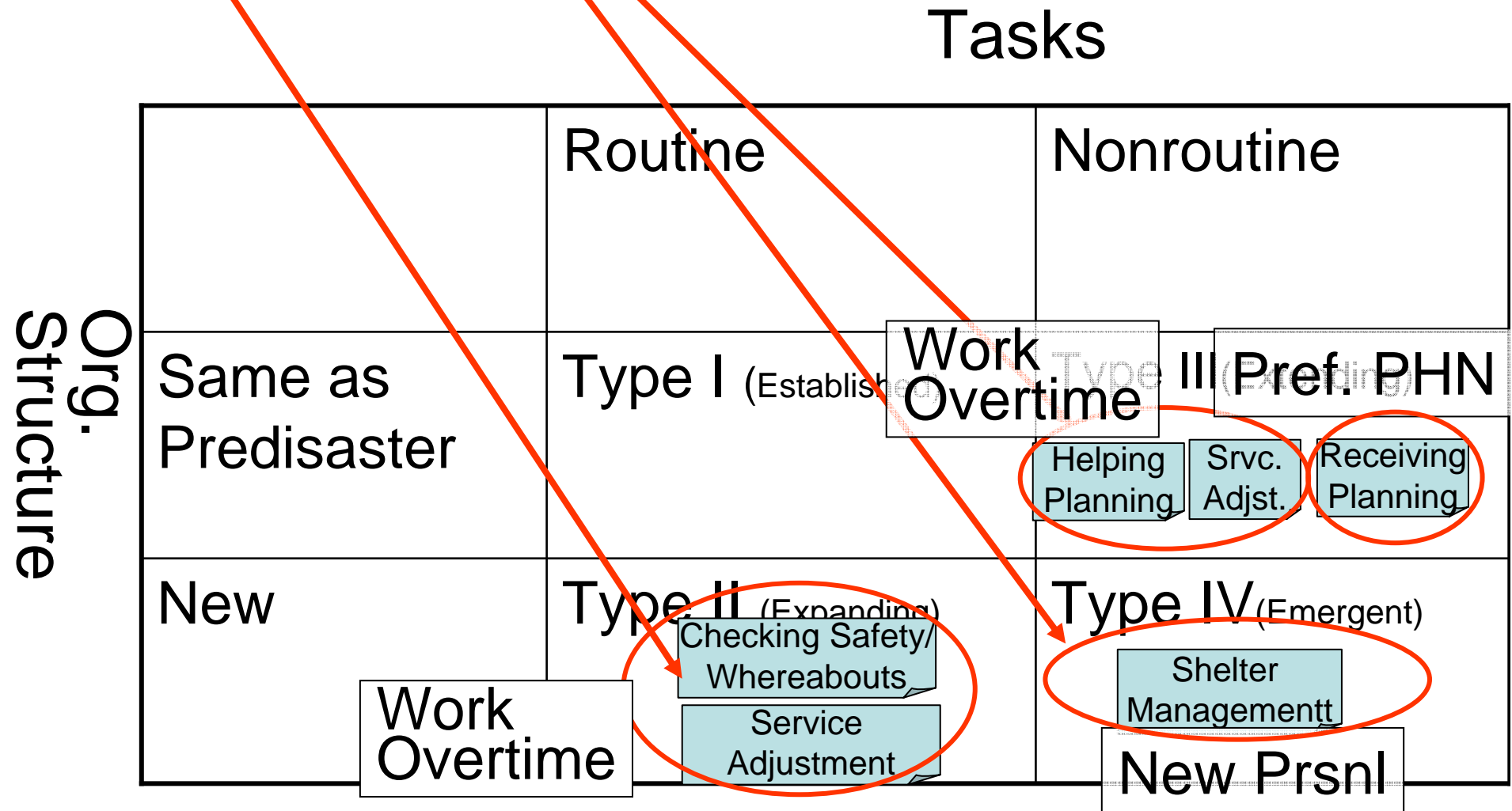
Tasks

Org. Structure		Routine	Nonroutine
	Same as Predisaster	Type I (Established)	Type III(Extending)
	New Mobilizing Residents	Type II (Extending) Evacuation Assist. Checking Safety/Whereabouts	Type IV (Emergent)

Source : Quarantelli, E.L. What is a Disaster? NY:Routledge, 1998, p.115.

Organizational Response to Disaster

Care Mngr & City Dpt. Response: 10~100hr



Source: Quarantelli, E.L. What is a Disaster? NY:Routledge, 1998, p.115.

Organizational Response to Disaster

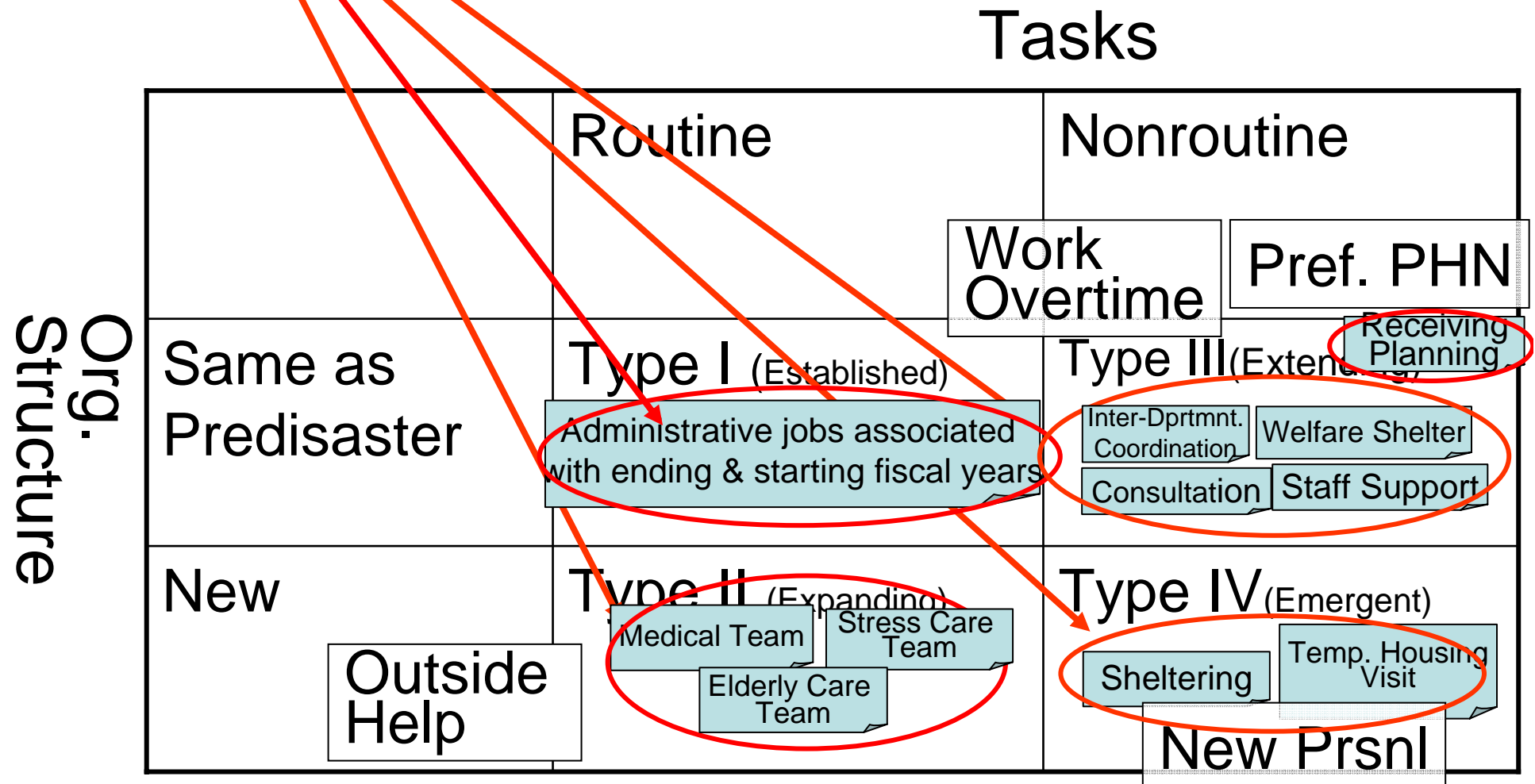
Care Mngr. Response: 100hr~1000hr

		Tasks	
		Routine	Nonroutine
Org. Structure	Same as Predisaster	Type I (Established) <div>Responding to Regular Clientele</div>	Type III(Extending)
	New	Type II (Expanding) <div>Service Adjustment</div>	Type IV(Emergent)
		Work Overtime	

Source: Quarantelli, E.L. What is a Disaster? NY:Routledge, 1998, p.115.

Organizational Response to Disaster

City Dpt. Response: 100~1000hr



Source: Quarantelli, E.L. What is a Disaster? NY:Routledge, 1998, p.115.

Vulnerability as a function of Hazards, Person, & Environment

Vulnerability is NOT intrinsic to a
Person, but is a Social Construction

Hazard Maps are Made Available from Municipality, Prefecture, & National Government Web Sites

岐阜県 総合防災

今日のお天気 → 詳細

1月29日 17:00発表

今日(1/29)		明日(1/30)	
美濃			
降水確率	- - - 30	30 10 20 40	
飛騨			
降水確率	- - - 30	50 0 20 60	
~6 ~12 ~18 ~24		~6 ~12 ~18 ~24	

予報警報

1月27日 18:20発表

注意報 / 警報

岐阜・西濃

中濃

東濃

飛騨南部

飛騨北部

防災関連情報

地震

東海地震、活断層など地震に関することを紹介します

風水害・土石流

風水害・土石流に関することを紹介します

有事・テロ

県の国民保護対策に関することを紹介します

消防組織

県内の消防組織を紹介します

00321655

岐阜県 浸水想定区域図ポータル

浸水想定

岐阜県内の浸水想定区域図

県全体の浸水想定区域図

県内全域の浸水想定区域図をとりまとめた統合版を

個別の河川が氾濫した場合の浸水想定

河川を選択するメニューを地域ごとに表示します。

- 飛騨地域の河川の検索
- 中濃地域の河川の検索
- 東濃地域の河川の検索
- 岐阜地域の河川の検索
- 西濃地域の河川の検索

閉

ふるさと地理情報センター - Mozilla Firefox

ファイル(E) 編集(E) 表示(V) 履歴(S) ブックマーク(Q) ツール(T) ヘルプ(H)

http://www.gis2.pref.gifu.jp/MyMap2_0/GifuAdvanceMap/GifuAdvanceMap.jsp?AUTHORIZED=

位置検索 データ一覧 地図追加 範囲検索 計測 URL 印刷 ヘルプ

木曽川水系揖斐川(国交省管理)浸水想定区域図[ID10000065]

この地図の情報を表す 衛星画像を表示する

凡例

浸水想定区域

- 浸水位区分
- 0.0m以上0.5m未満
- 0.5m以上1.0m未満
- 1.0m以上2.0m未満
- 2.0m以上5.0m未満
- 5.0m以上

土砂災害警戒区域

- 土砂災害特別警戒区域(レッドゾーン)
- 土砂災害警戒区域(イエローゾーン)

追加マップ一覧

追加レイヤー一覧

基本地図

- 建物
- 地名・境界等
- 道路・鉄道・水路
- 地形
- その他

衛星画像

航空写真

航空写真(岐阜県農山村政策課)

リファレンスマップ

岐阜エリア

西濃エリア

中濃エリア

東濃エリア

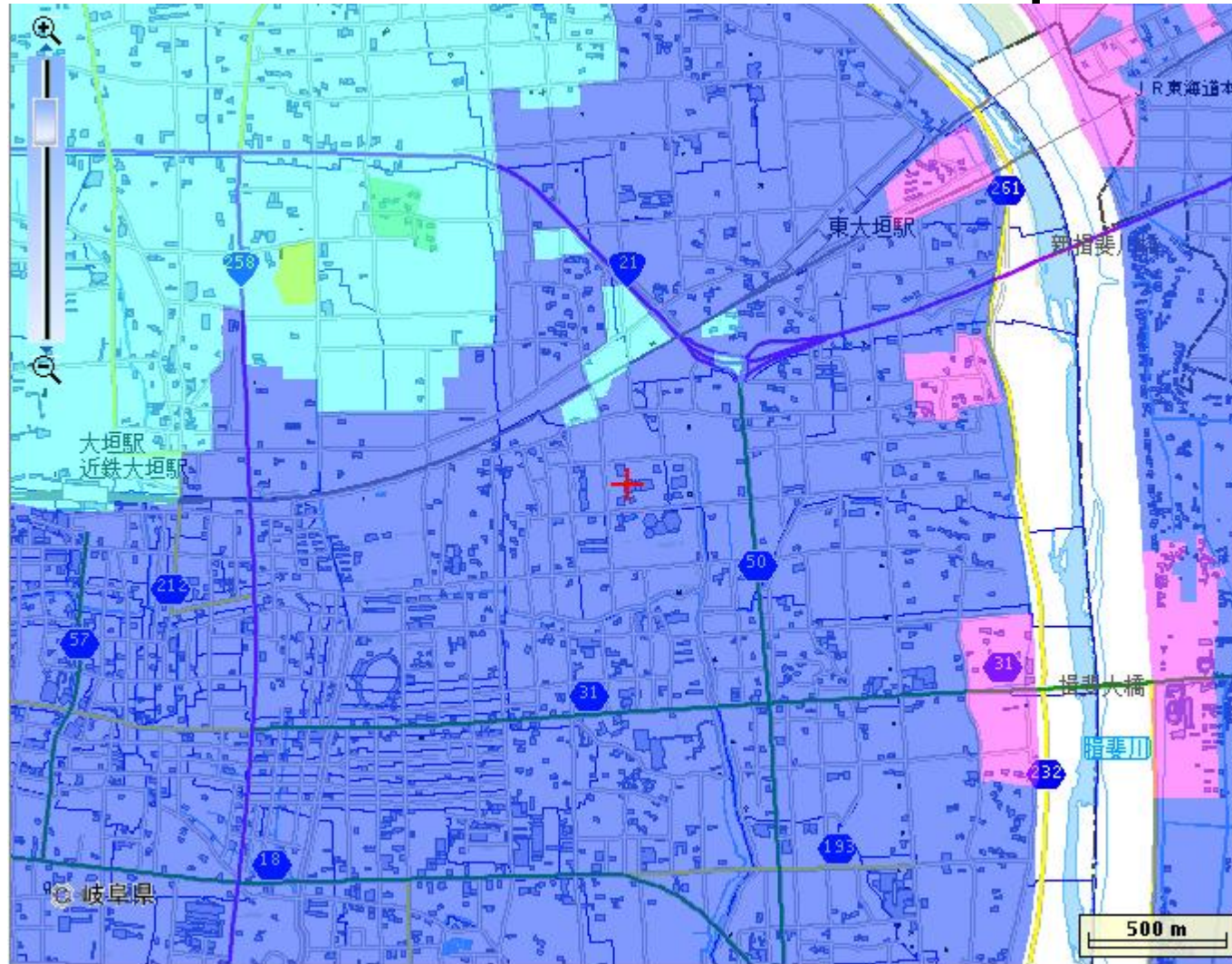
飛騨エリア

X:-47933.75 Y:-70033.47 E136° 38' 20.994" N35° 22' 3.313"

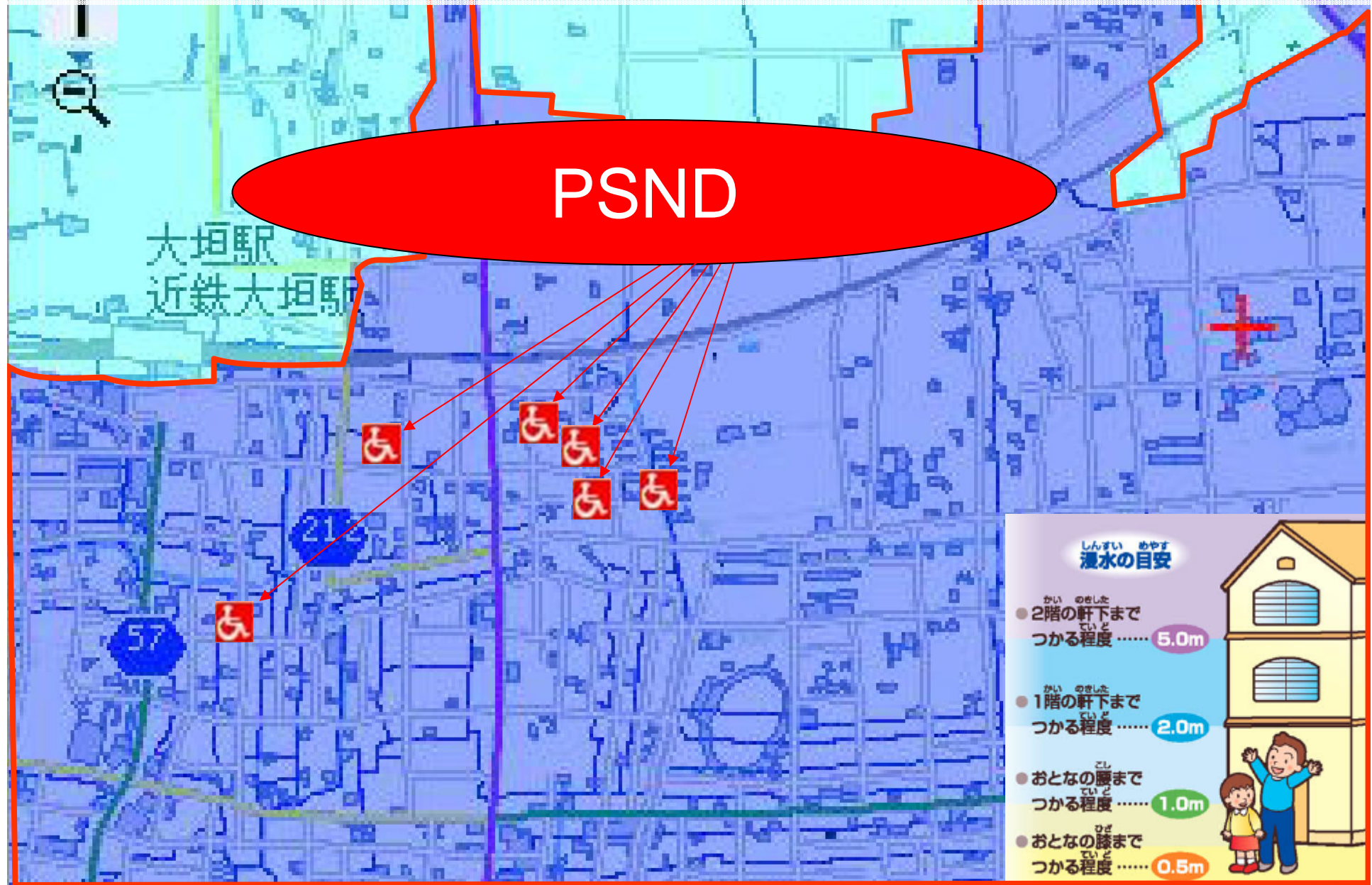
※ 中心に表示したい地点をダブルクリックすると、中心に表示されます

完了 Proxy: なし

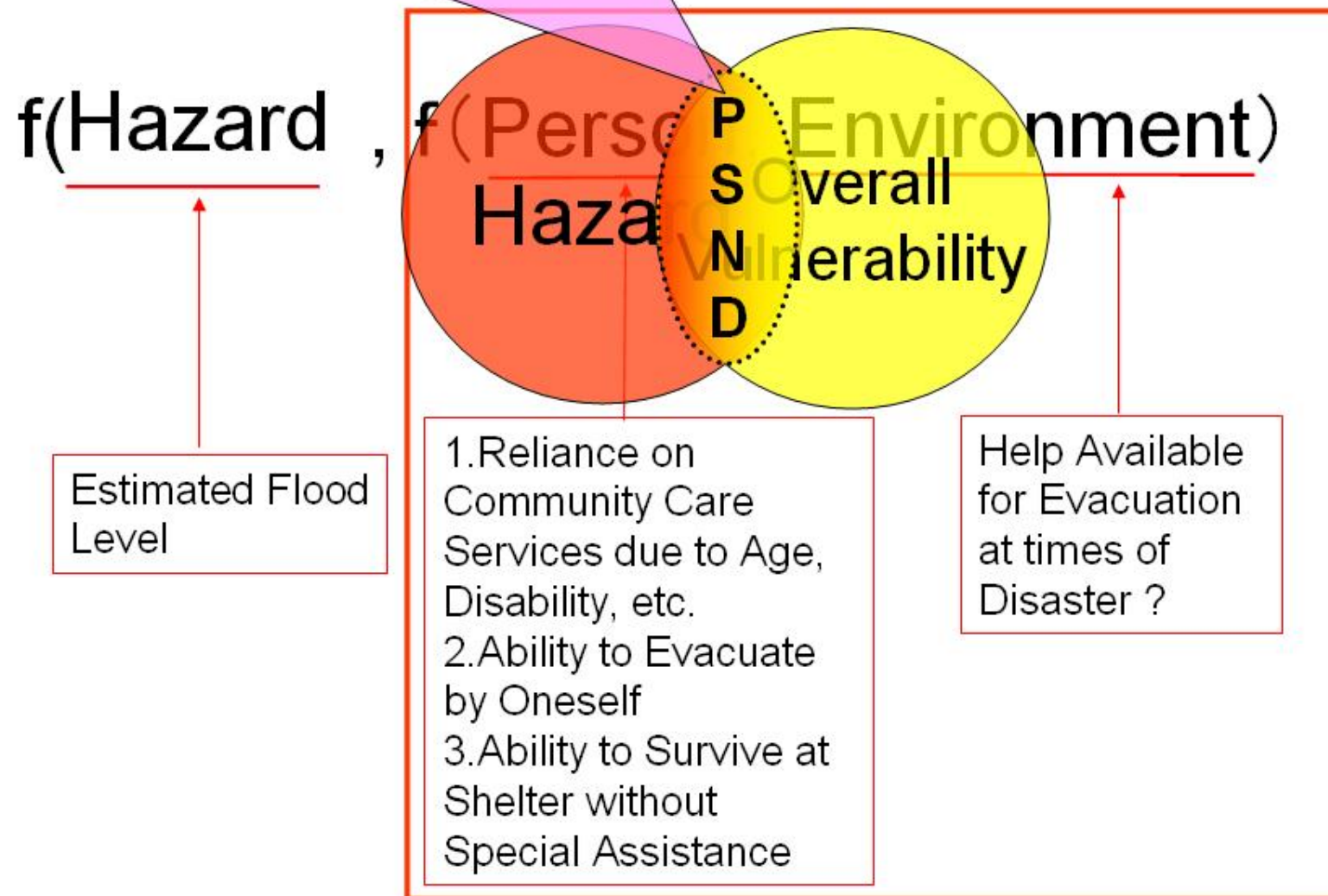
Hazard Maps are Used as a Tool to Warn Disaster Susceptibility



The Degree of Special Needs at times of Disaster can be Measured Using Hazard Maps, & Person-Situation Profiles



Person with Special Needs at times of Disaster

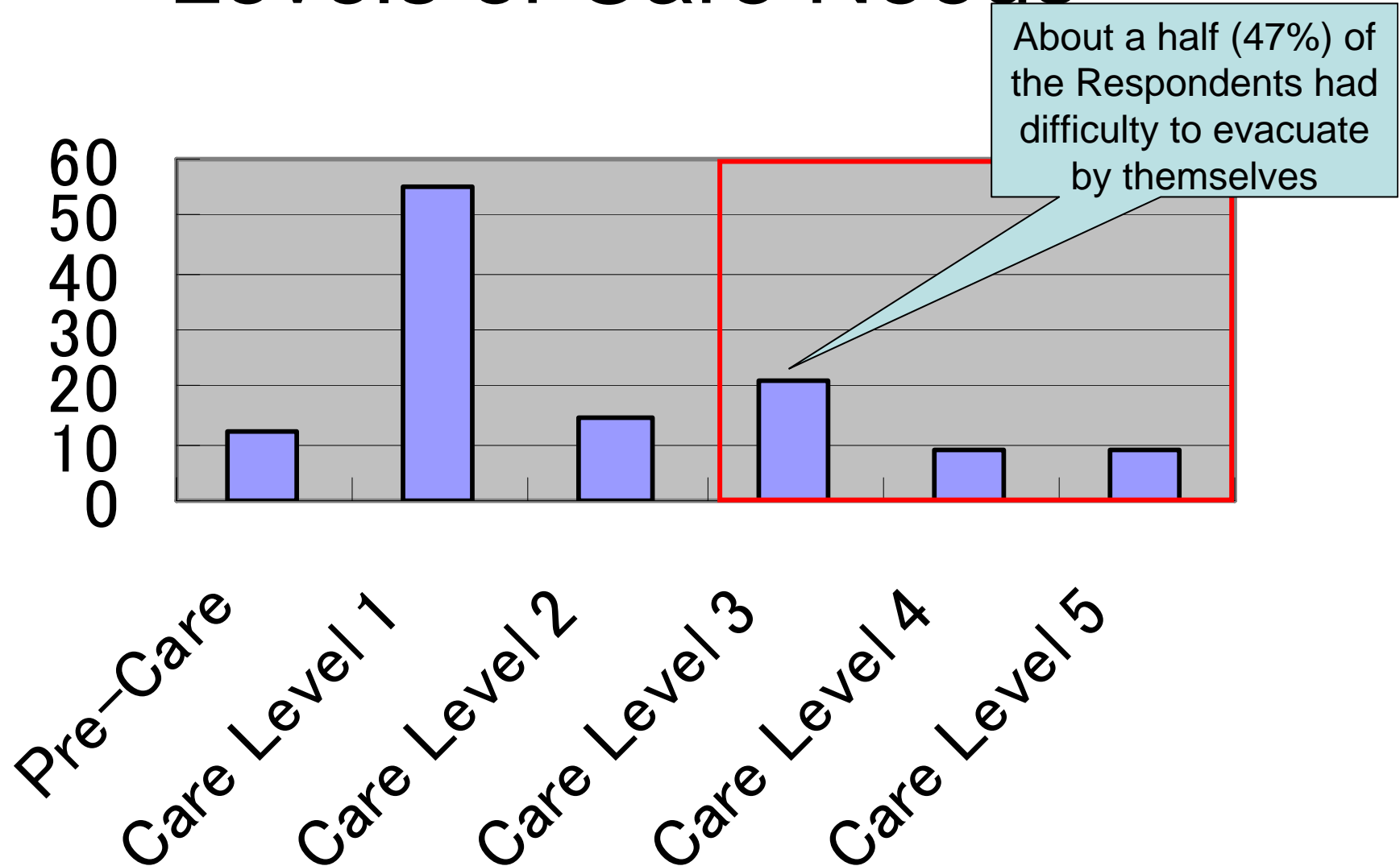


Person-Situation Profiles

GIS Mapping of Persons with Special Needs at times of Disaster (PSND)

Kobe City Project

Levels of Care Needs



N=123

Social Isolation Scale Items & Weights

Item options weights were obtained by means of Optimal Scaling that assigned weights to maximize the internal consistency reliability (Cronbach's alpha).

		Frequency	Weights
Gender	Male	46	0.411
	Female	77	-0.265
Age	Under 65	14	-0.065
	65 - 75	21	0.080
	75 - 85	58	0.108
	85 -	30	-0.284
Using Short-term Stay Service	Yes	17	0.687
	No	106	-0.124
Using Day - Care Services	Yes	61	0.333
	No	62	-0.351
Using Home-Help Services	Yes	69	-0.614
	No	54	0.757
Types of Family	Single	36	-1.247
	Couple	40	0.889
	Living with Son	27	-0.009
	Living with Daughter	16	0.463
	Living with Partent	1	1.108
	Living with Grandchild	2	-0.438
Alone during Day	Living with Sibling	1	0.421
	Yes	57	-0.802
	No	61	0.774
Key Person	N.A.	5	
	Spouse	32	1.091
	Son	36	-0.577
	Daughter	28	-0.218
	Daughter in Law	5	0.142
	Sibling	5	-1.145
	Other	2	-0.303
Key Person Address	N.A.	15	
	The Same	63	0.666
	The Same Block	7	-0.198
	The Same Ward	13	-0.857
	The Same City	8	-1.511
	The Same Prefctr	4	-1.251
	Outside Prefctr	5	-1.469
	N.A.	23	

Female, over 85 yrs of age, Using home-help as opposed to day-care or short-term stay services, Living alone, Not Living with key person

Housing Structure & Location of Bedroom Index

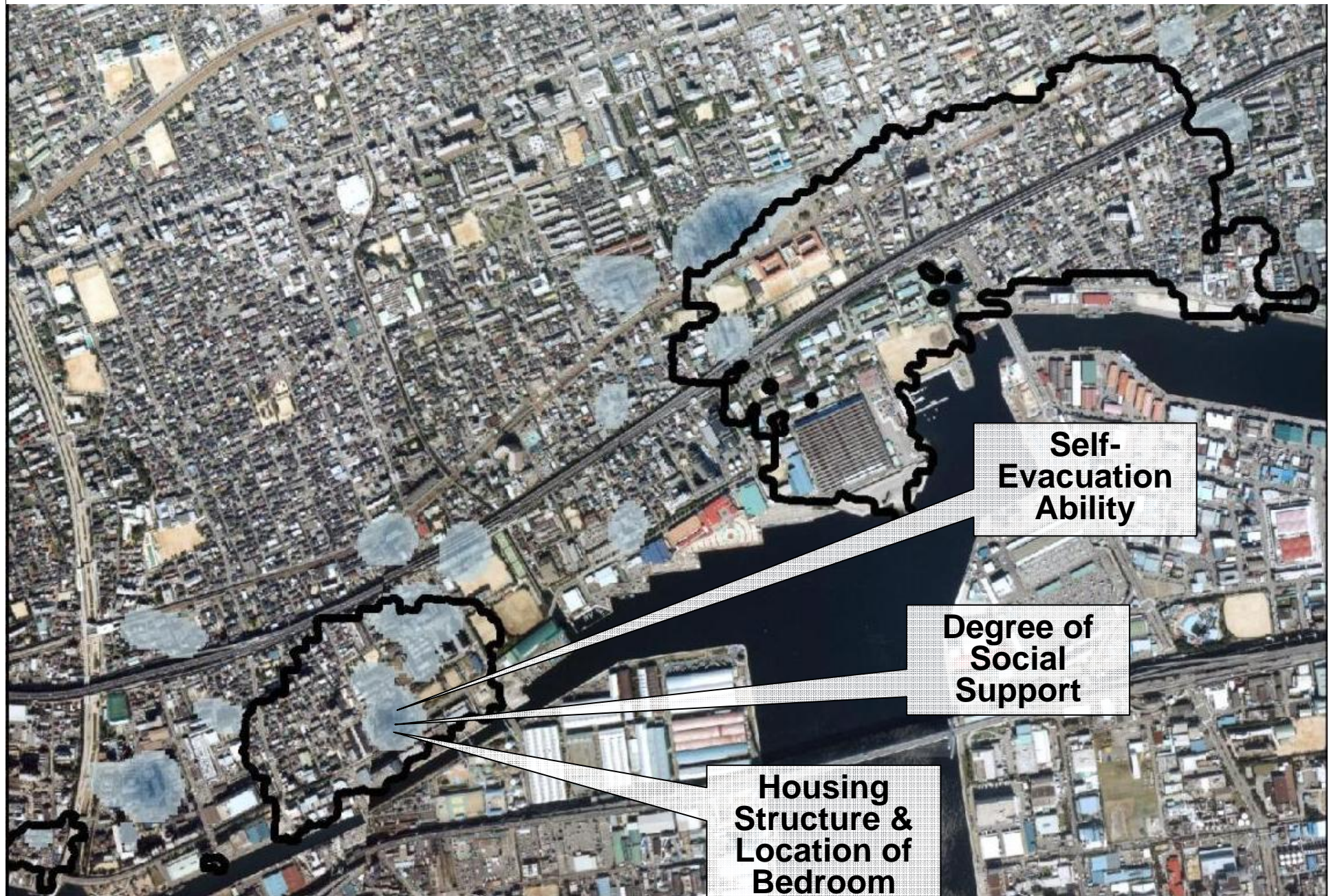
		Frequency	Weight
Bedroom Floor	1st Floor	49	-1.078
	2nd Floor or above	74	0.712
When the House was built	Before 1981	48	-0.408
	After 1981	75	0.259
House Structure	Woden	31	-1.550
	RC-Reinforced	90	0.537
	N.A.	2	

Estimating Relative Importance of the Three Factors: A Paired Comparison Experiment

Factor	Relative Importance
1. Level of Care Needs	2.6
2. Social Isolation	3.3
3. Housing Structure & Location of Bedroom	1.0

The above parameters were estimated from a paired comparison experiment conducted to 18 care-managers who responded to PSND's during 2006 July Flooding & Landslide Disaster in Shimo-Suwa Township in Nagano Prefecture.

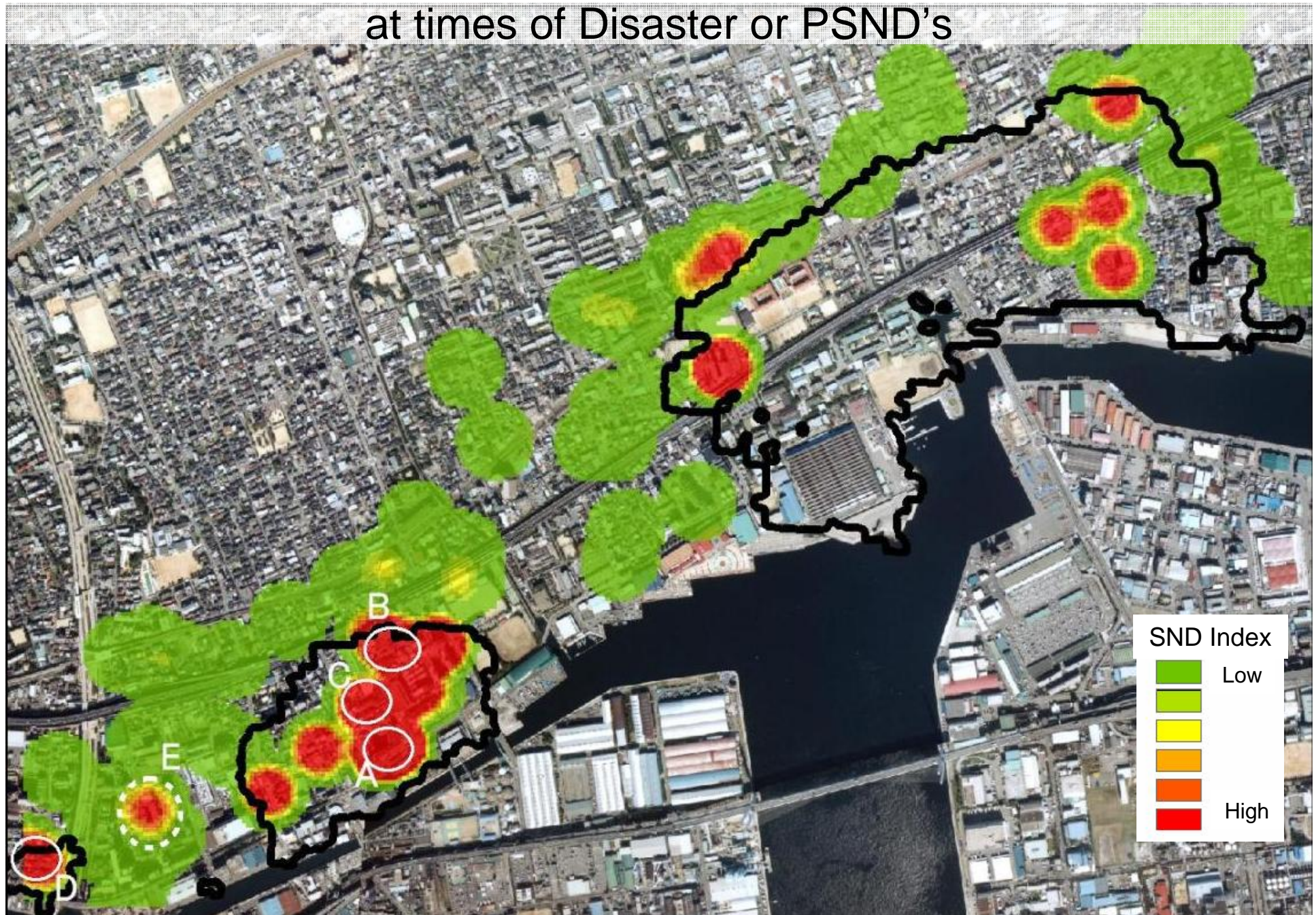
Kernel Density Mapping of 123 Respondents Who Reside within Tonankai-Nankai EQ High Tsunami Risk Zone (Population 1210 people)



Weighted Kernel Density Mapping of Persons with Special Needs or PSN's

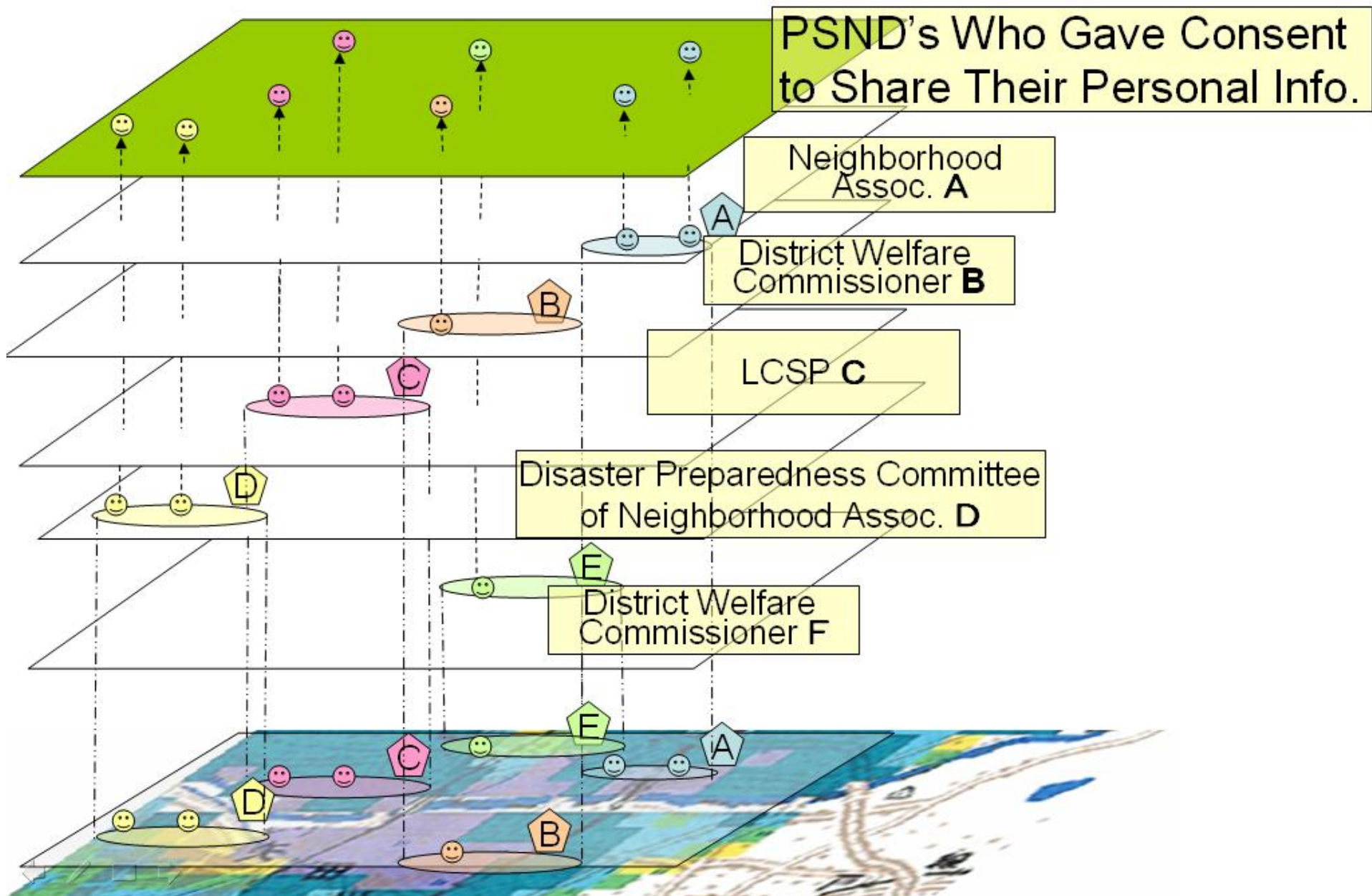


Weighted Kernel Density Mapping of Persons with Special Needs at times of Disaster or PSND's

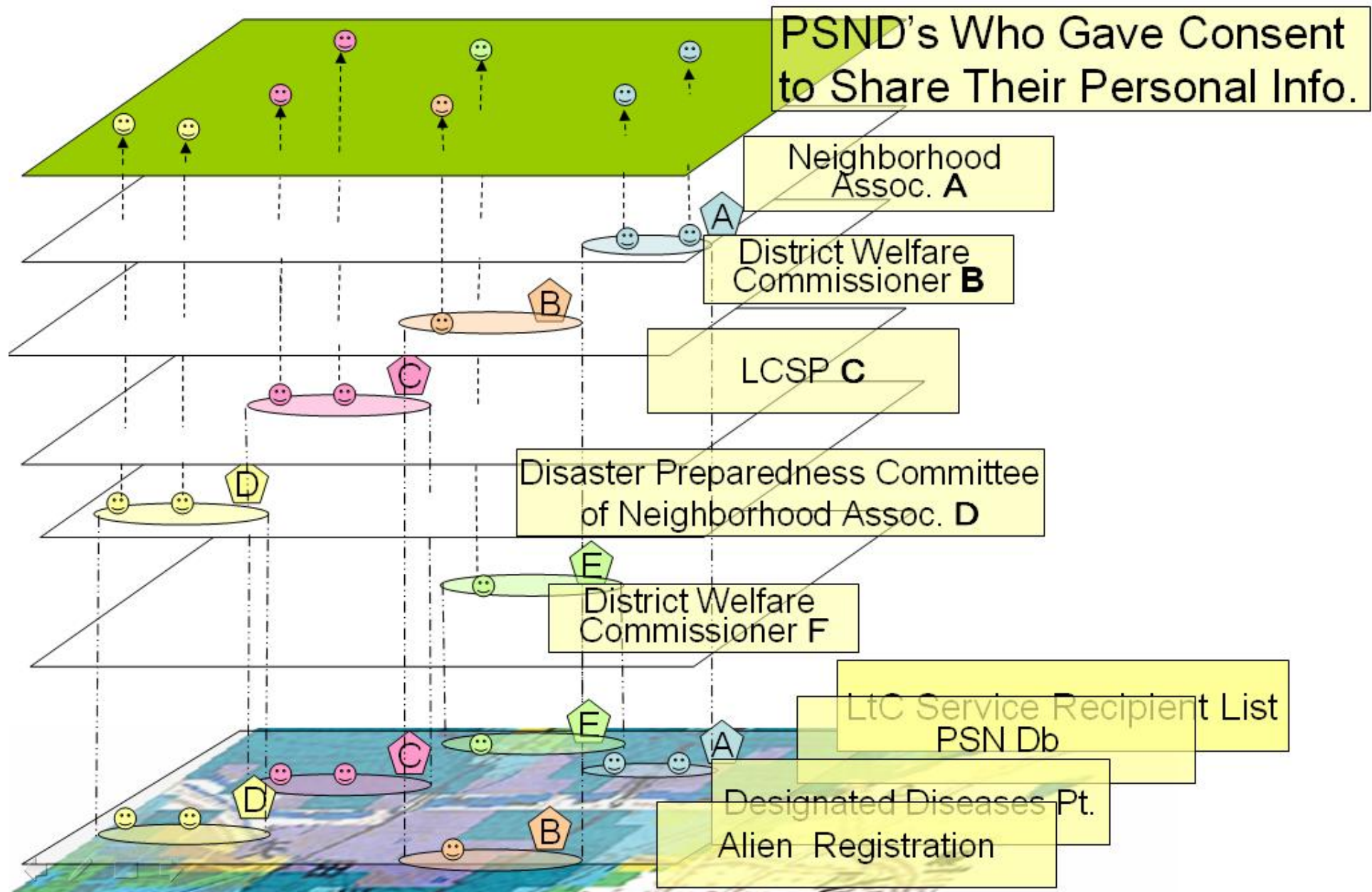


Strategies for Creating Individualized Evacuation & Sheltering Plans

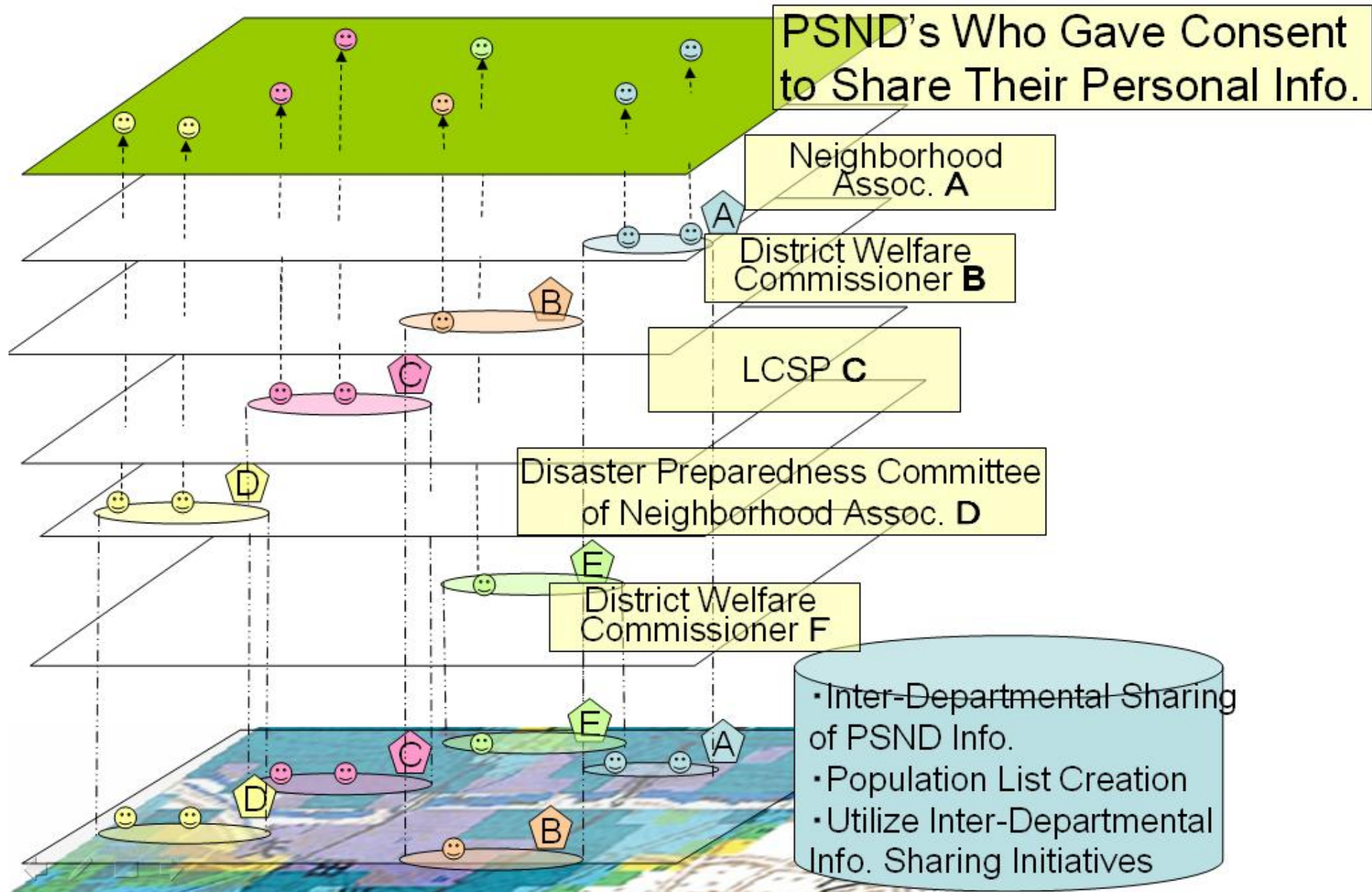
Build Evacuation & Sheltering Support System by means of Collaboration among Different Stakeholders: The Key to Obtain & to Share Information is the **Consent from PSND's**



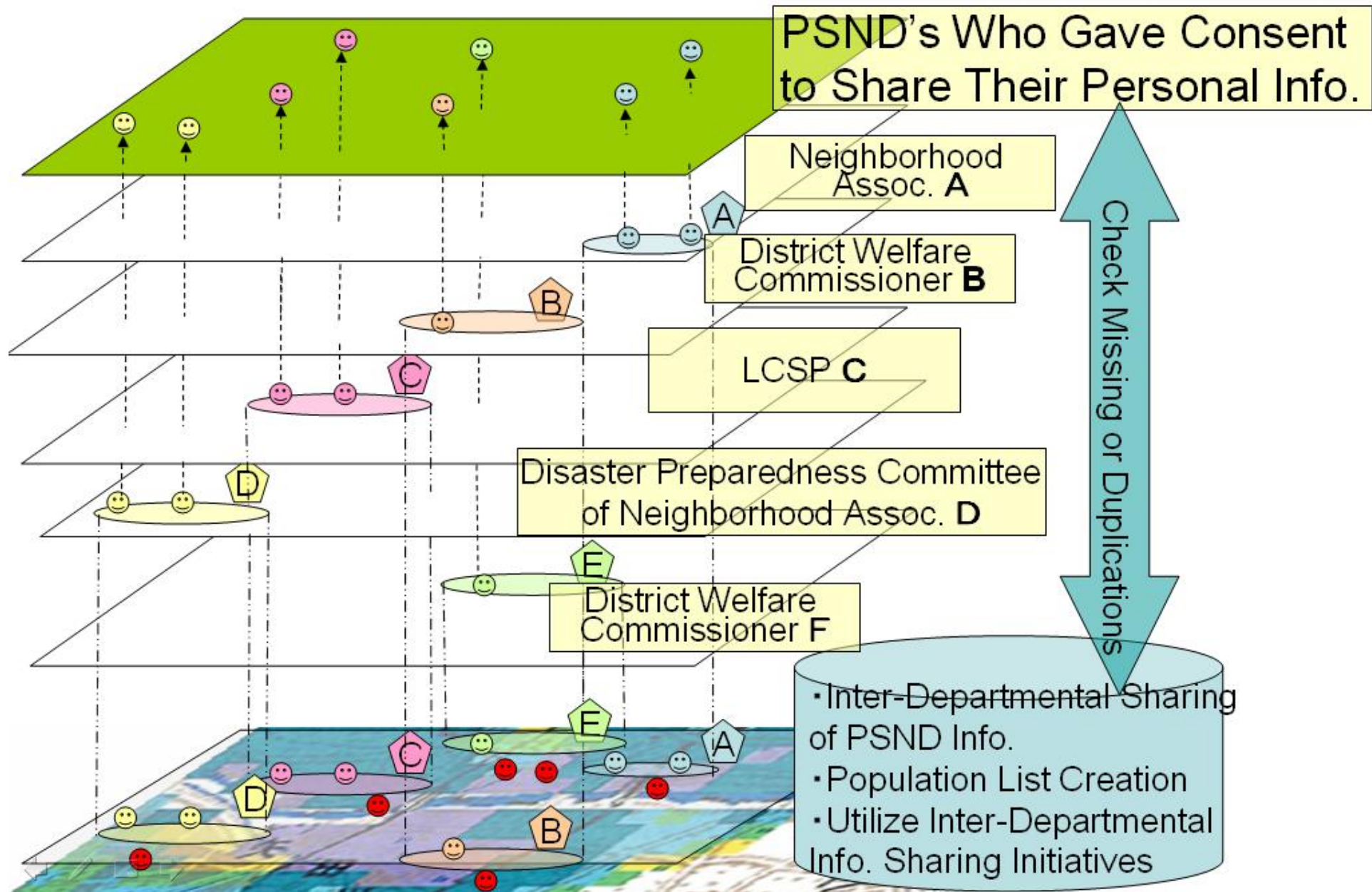
Build Evacuation & Sheltering Support System by means of Collaboration among Different Stakeholders: The Key to Obtain & to Share Information is the **Consent from PSND's**



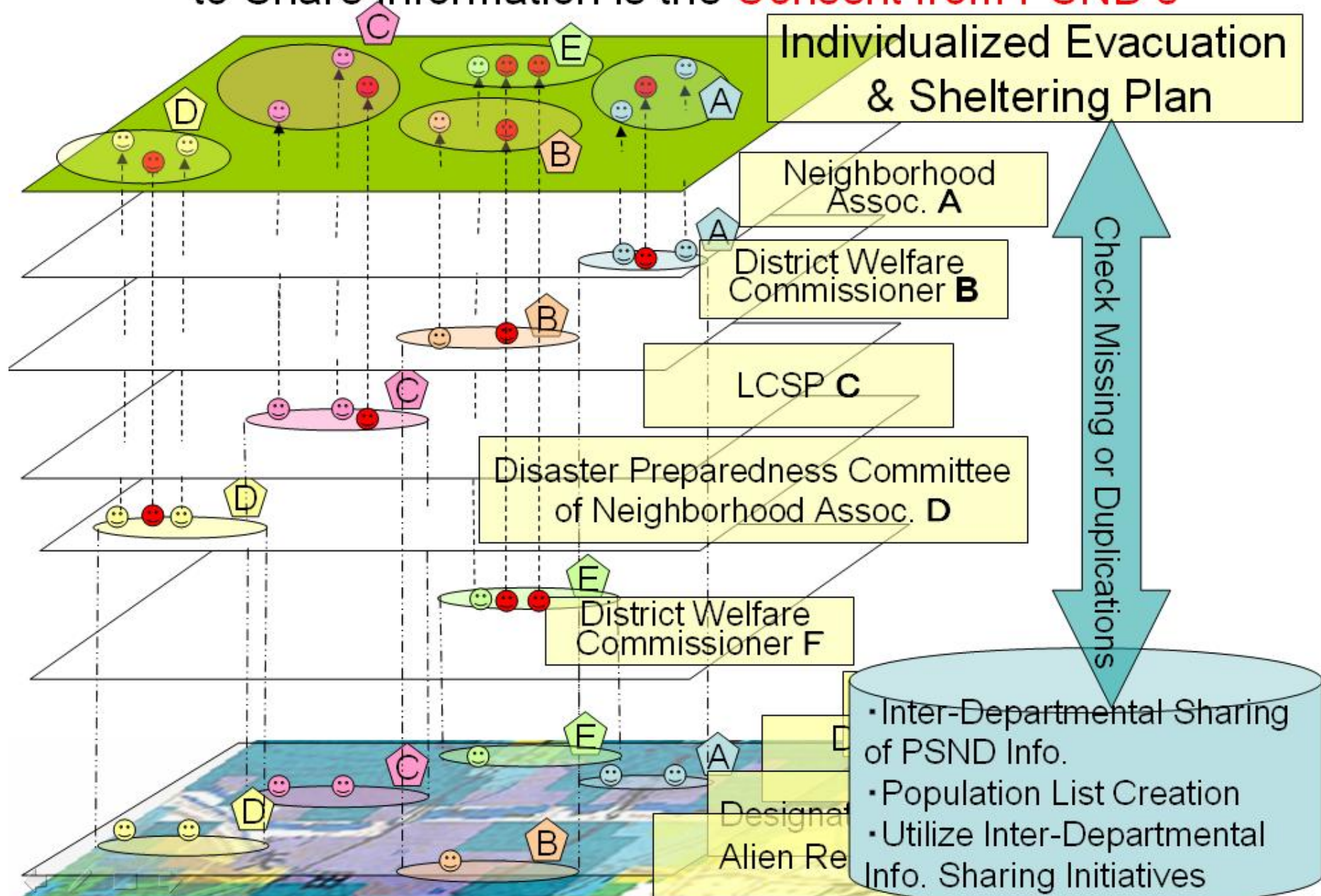
Build Evacuation & Sheltering Support System by means of Collaboration among Different Stakeholders: The Key to Obtain & to Share Information is the **Consent from PSND's**



Build Evacuation & Sheltering Support System by means of Collaboration among Different Stakeholders: The Key to Obtain & to Share Information is the **Consent from PSND's**



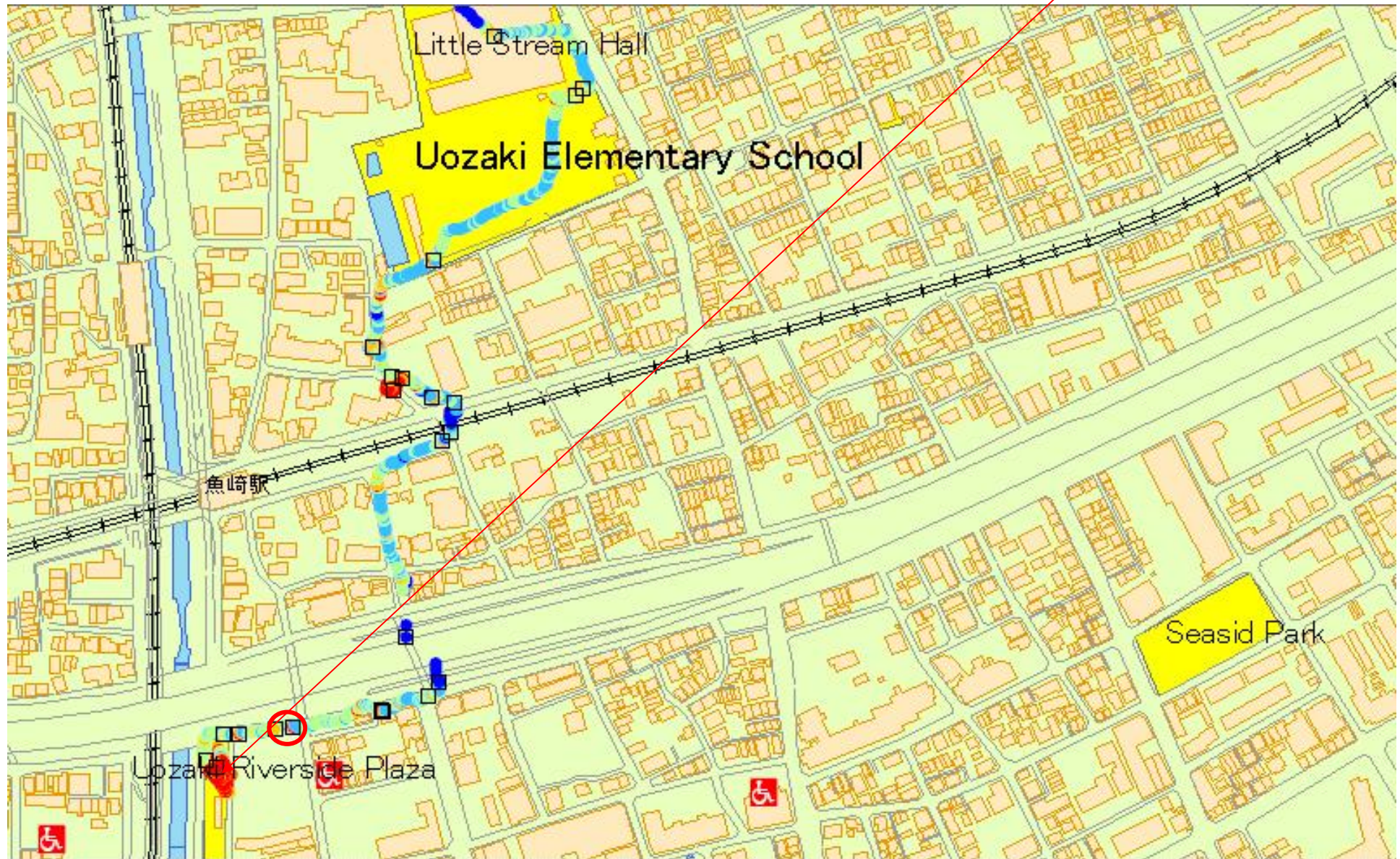
Build Evacuation & Sheltering Support System by means of Collaboration among Different Stakeholders: The Key to Obtain & to Share Information is the **Consent from PSND's**



Uozaki Tsunami PSND Assistance Drill by Resident Associations

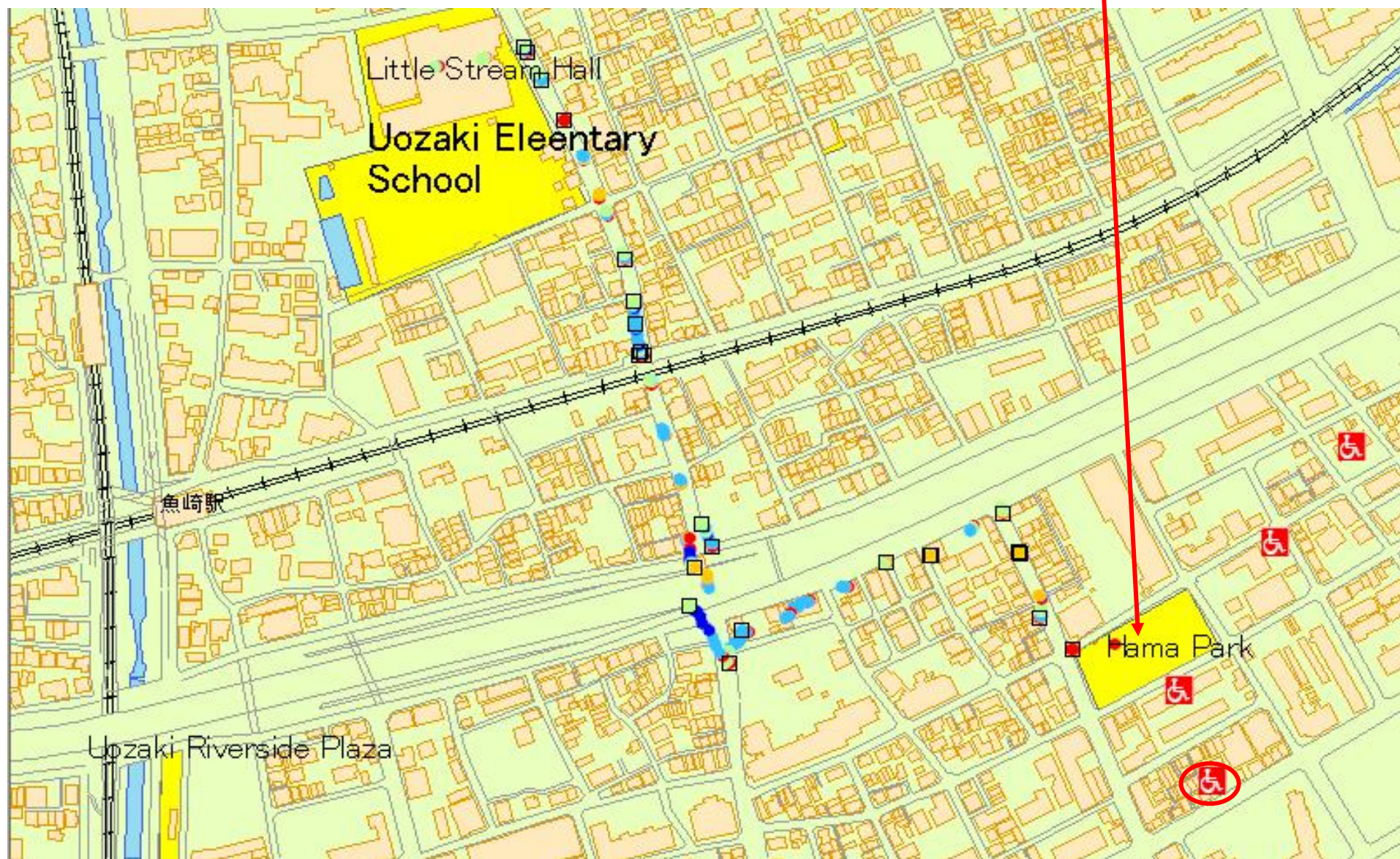
March, 2007

A Team Starting From Riverside Plaza





A Team Starting from Hama-Park





SA380003.JPG

2007年03月11日 09時47分



SA380004.JPG

2007年03月11日 09時48分



P1000656.JPG

2007年03月11日 09時48分



P1000658.JPG

2007年03月11日 09時49分



SA380006.JPG

2007年03月11日 09時49分



P1000659.JPG

2007年03月11日 09時50分



P1000661.JPG

2007年03月11日 09時51分



SA380007.JPG

2007年03月11日 09時52分



P1000665.JPG

2007年03月11日 09時52分



SA380008.JPG

2007年03月11日 09時52分



P1000667.JPG

2007年03月11日 09時52分



P1000668.JPG

2007年03月11日 09時52分

A Team Starting from Hama-Park

