POSSIBILITY OF TRAFFIC SAFETY ACTIVITY USING HIYARI MAP DEVELOPMENT IN COMMUNITY OF THAILAND

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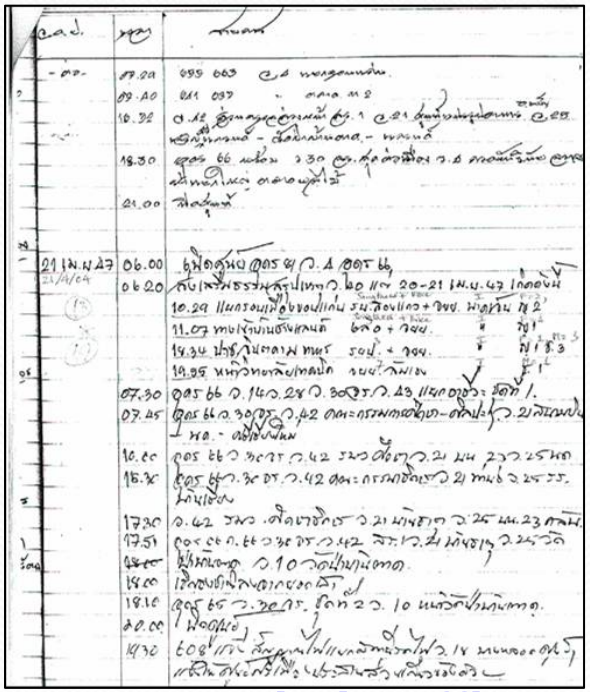
Situation of traffic accident in Thailand

- The number of fatalities : 14,000 per year (2003)
  (22.9 per 100,000)
- In Japan, The number of fatalities: 6,639 per year (2007)
  (5.2 per 100,000)
- It is four times higher than that in Japan

Problem

- Since proper traffic accident database has never been developed, we cannot identify black spots and reason of traffic accident effectively.
- The level of public safety awareness is quite low.



Recorded traffic accident on note

Four person ride motorcycle

Hiyari map development WS in Japan

- Hiyari map development WS in Japan
  : Identifying potential black spots
  : Raising awareness of traffic safety

Photo from website of Chokai Town, Akita
http://www.town.chokai.akita.jp/

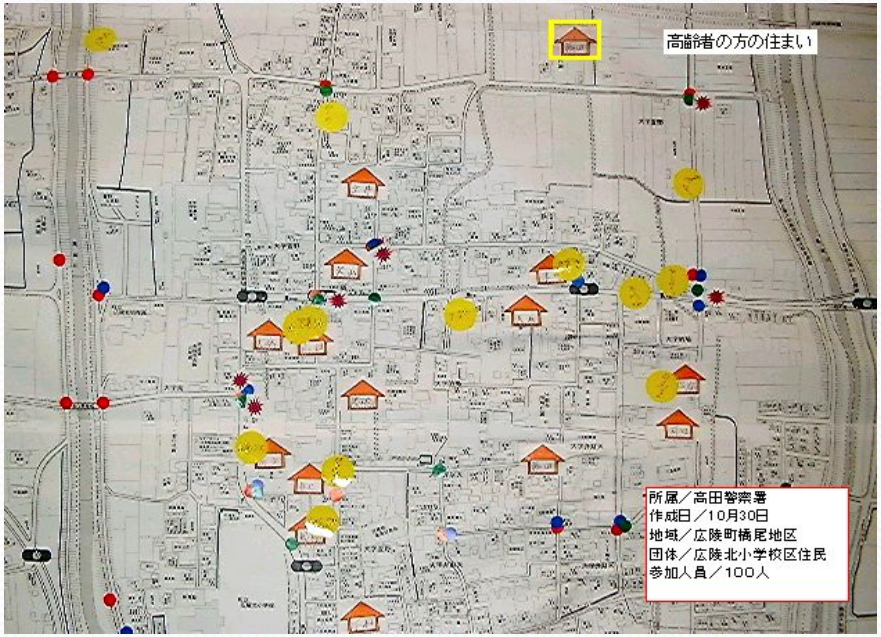
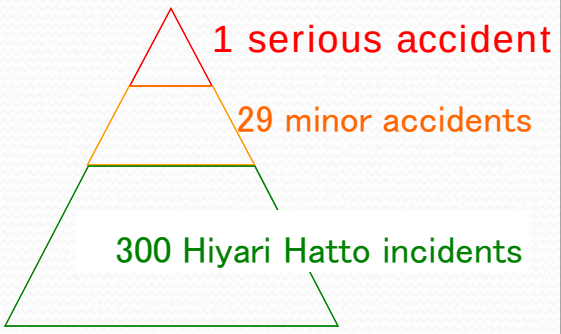


Photo from website of Nara police
http://www.police.pref.nara.jp/

What is Hiyari? Hiyari map?

- **Hiyari ?**
  Hiyari is a Japanese word which expresses the feeling of danger, fear or surprise when people have been facing an unexpected traffic incident occurrence.
- **Hiyari Map ?**
  Hiyari Map is map on which Hiyari are showed. We can understand potential black spots.
- **Hiyari Map Development WS ?**
  Hiyari map development WS is an activity to encourage local people to develop Hiyari map in community.



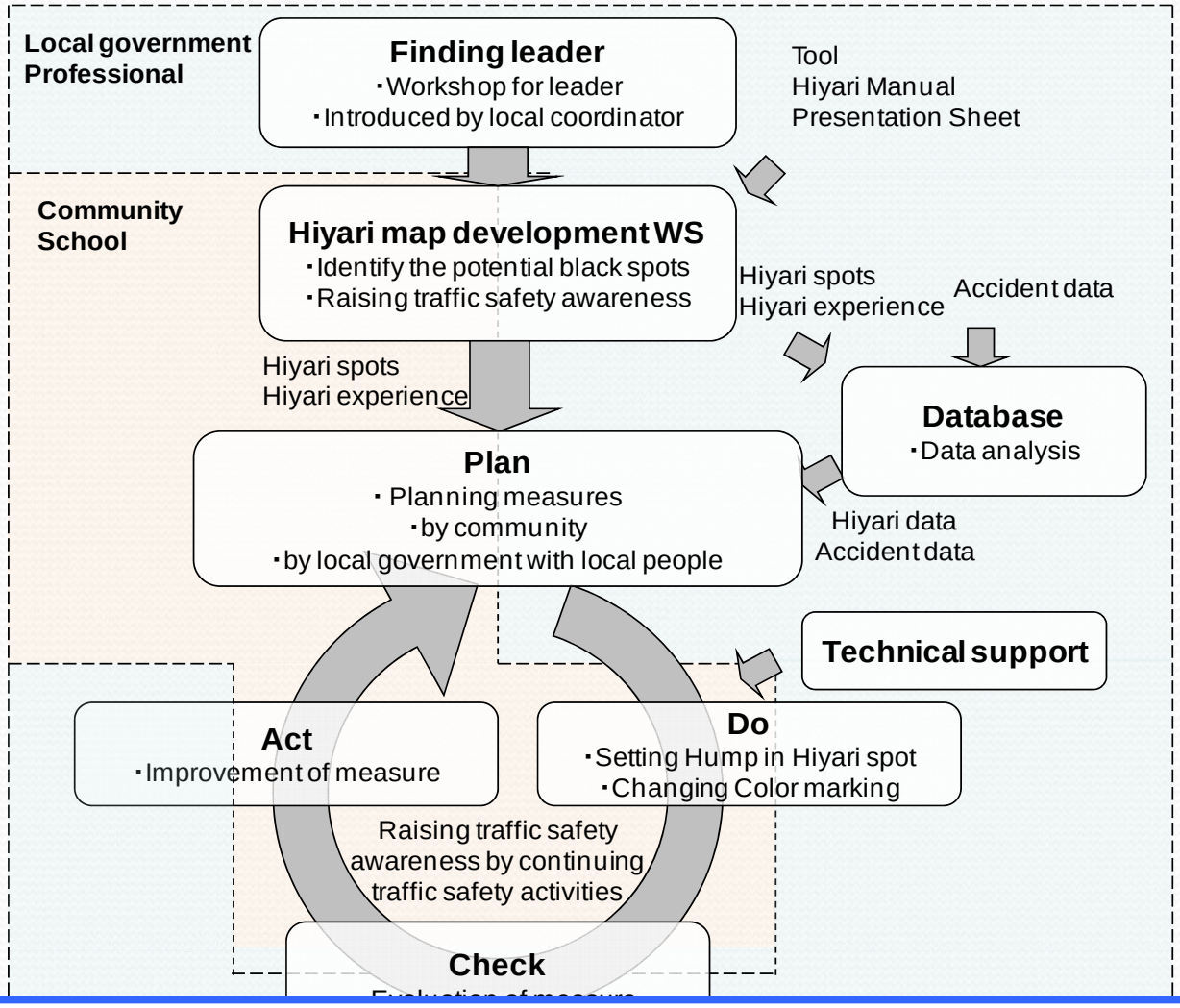
Objective of the study

- Objective of this study is to confirm that Hiyari map development can be introduced to local communities in Thailand

  :which can help identifying potential black spots data

  :which can help rising awareness of traffic safety

Community Based Approach for Traffic Safety Activity through Hiyari Map Development in Thailand



We organized Hiyari map development in line with this flow

Organize Hiyari Map Development WS

Udonthani

Area: Around Pithayanukhun high
Date: 2006.2.25
Participants: 17 local people

Area: Nongbua communitys
Date: 2006.8.9
Participants: 14local people

Organize Hiyari Map Development WS

Khon Kaen

Area: Kaankheha community
(Khon Kaen municipality)
Dare: 2006.9.6
Participants: 16 local people

Area: Kaankheha community
(Mungkao county)
Dare: 2006.11.27
Participants: 23 local people

Area: Khon Kaen Universty
Dare: 2006.9.5
Participants: 18 students
11 guards

Area: Khon Kaen Universty
Dare: 2006.11.28
Participants: 36 students

Organize Hiyari Map Development WS

Chiang Mai

Area: Nonghoi community
Date: 2007.11.26
Participants: 24 local people

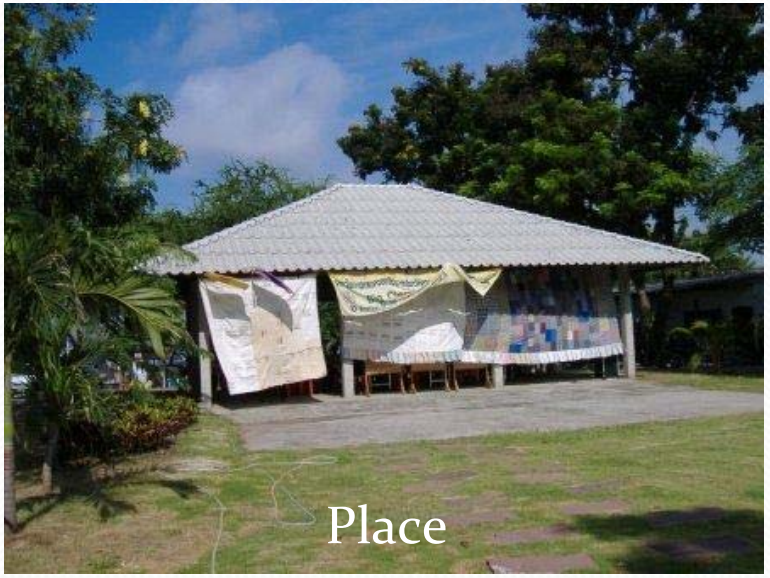
Samutprakarn

Area: western area in Samutprakarn
Date: 2006.8.11
Participants: 30 junior high shool students

Process of Hiyari map development WS

Process of Hiyari map development WS

- Preparation
  :Place,
  :Blank local map,
  :Tools


Place

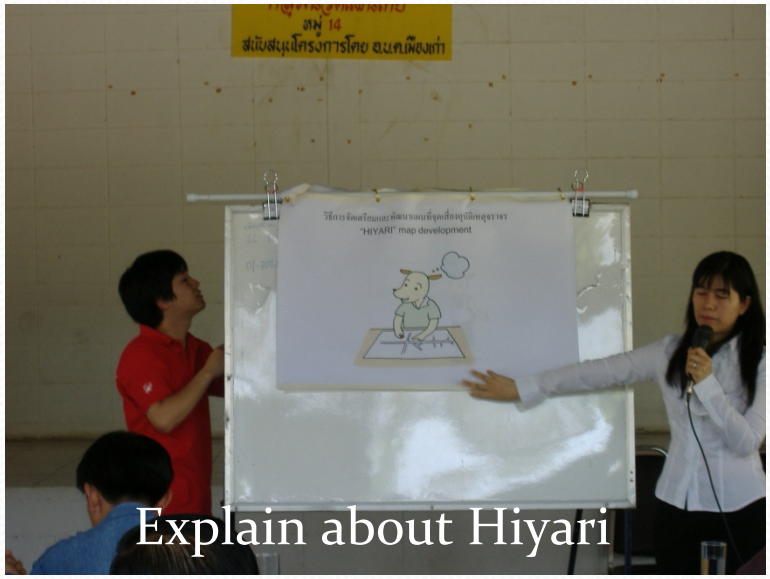
Map


Tools

Process of Hiyari map development WS

- Self introduction
- Explain about Hiyari
- Pasting round stickers on Hiyari spots


Self introduction

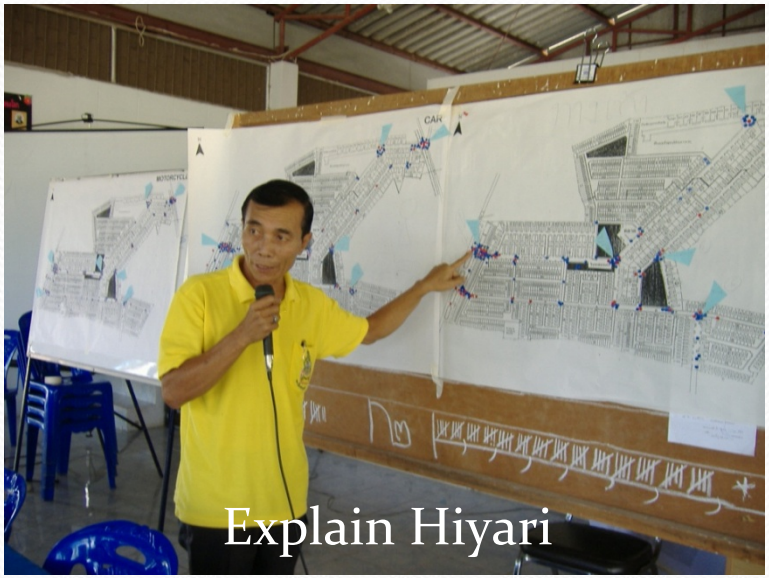


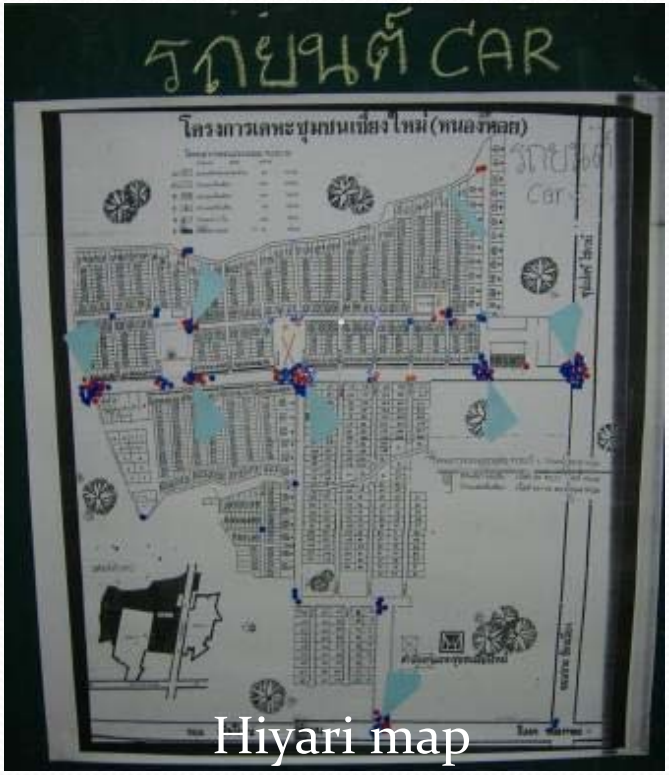
Explain about Hiyari


Pasting stickers

Process of Hiyari map development WS

- Participants explain their Hiyari experiences





Process of Hiyari map development WS

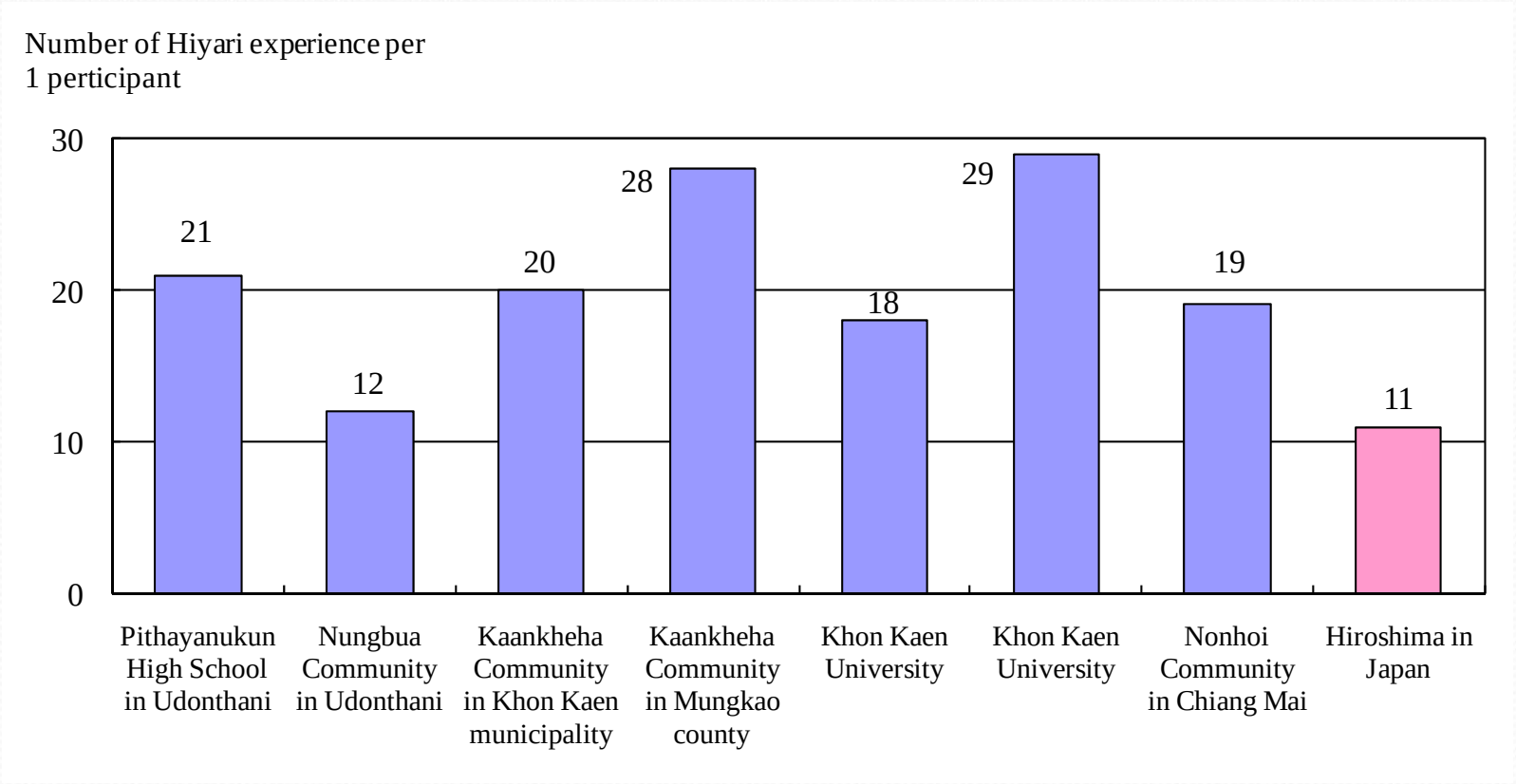
- Participants visited Hiyari spots

Process of Hiyari map development WS

- Closing ceremony
  :present a certification
  :group photo

Analyze Hiyari Data, characteristic of Hiyari data

Number of Hiyari experiences

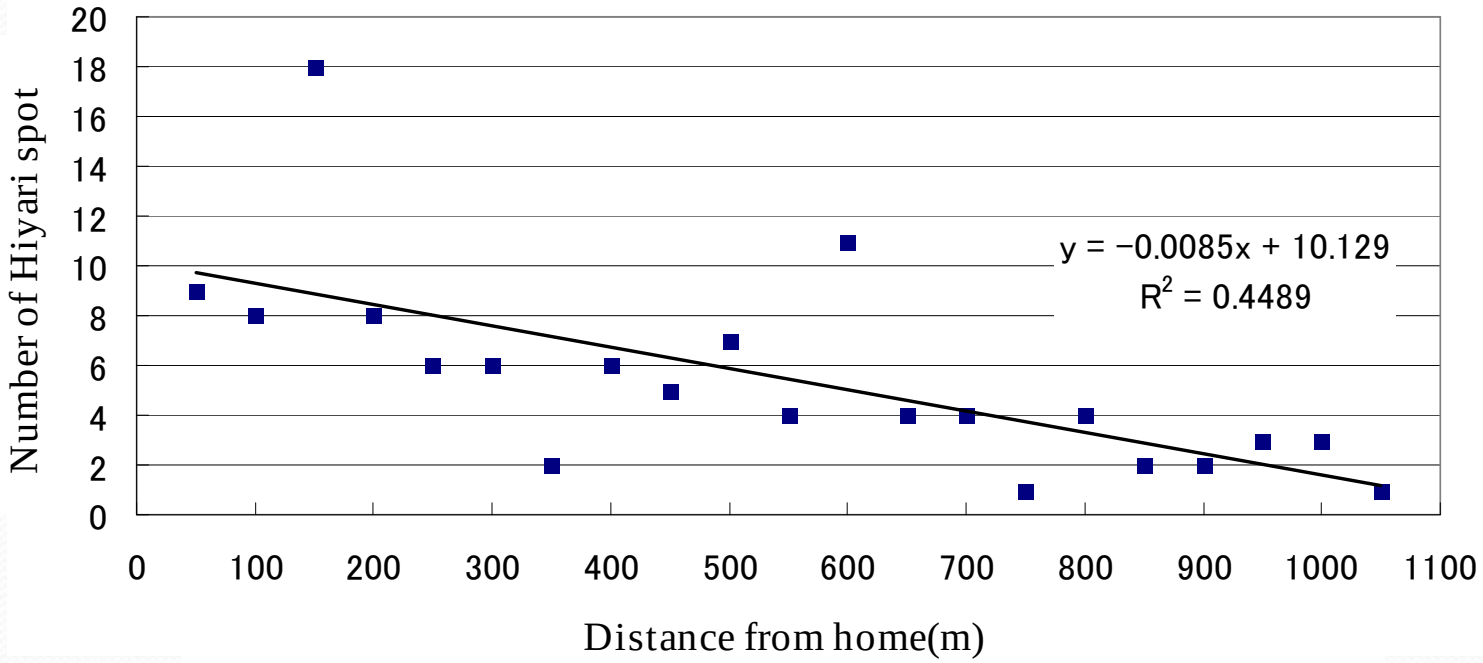


- Thai case compared to Japanese case, Hiyari data could be collected from Hiyari map development WS in Thailand more than Japan.

Location of Hiyari spots

- Hiyari experiences were gathered at main intersections like entrance and center of community. However, few Hiyari experiences located on community road also.

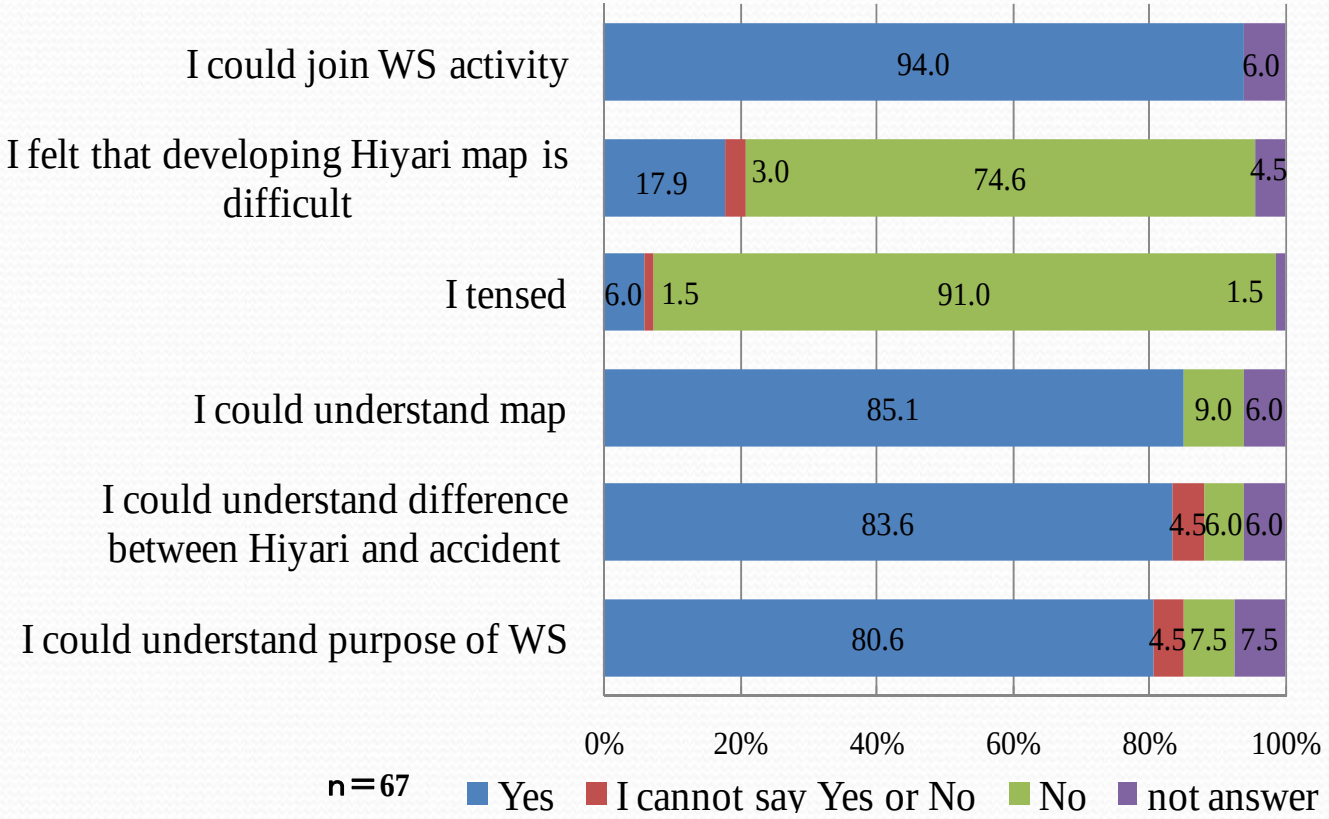
Relationship between distances from participant's home and number of Hiyari spots



- Correlation in that many Hiyari spots located around home and few Hiyari spots located farther from their home.

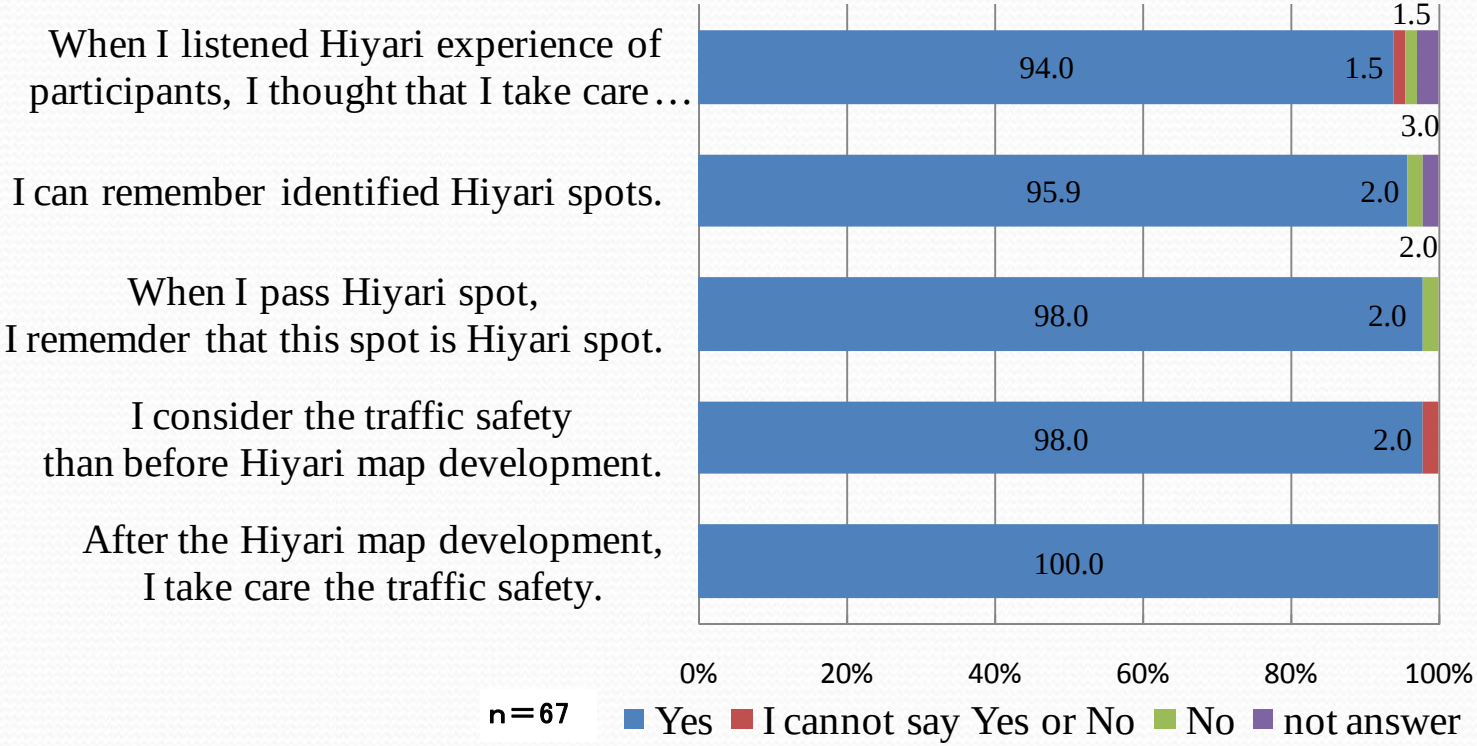
Identify Evaluation of Hiyari map development WS by questionnaire

Participation and understanding of purpose of Hiyari map development WS



- Almost participants could join actively and relax. Thus atmosphere of Hiyari map development WS proper for community activity.

Raising awareness of traffic safety



- We did not confirm about their behavior actually changed for safety. However, we think that at least their awareness of traffic safety was raised.

Identify Effective of Hiyari map development WS for community

Hiyari conference

Purpose
To ask the effectiveness of Hiyari map development WS and to give motivation regarding for traffic safety to participants.

Date
2008.3.22

Venue
Conference room of Hotel in Bangkok

Participant
Community leaders and coordinators:13
Observers: 6

Contents of conference
Participants reported their experiences of Hiyari map development WS and community activities after the Hiyari map development.

Conference

Participant report

Report from each community

Nongbua community in Udonthani

They installed speed hump at three identified Hiyari spots after the Hiyari map development WS.

hump

Kaankheha Community in Khon Kaen

They installed traffic signal and reflection light in two identified Hiyari spots. In addition, reported the continuation of traffic safety activity like parade for traffic safety with local hospital.

Parade

Nonhoi Community in Chiang Mai

They visited Hiyari spots in community and checked

Hiyari map development WS triggered traffic safety activity in community and raised traffic safety awareness of local participants.

Conclusions

Objective of the study

- Many Hiyari data could be collected from Hiyari map development WS in Thailand.
- Characteristics of Hiyari data are shown
- Almost participants could join actively and relax.
- Their awareness of traffic safety was raised.
- Hiyari map development triggered traffic safety activity in community and raised traffic safety awareness of local participants

Hiyari map development WS could be organized in communities of Thailand which is quite effective in identifying potential black spots and raising traffic safety awareness.


Thank you very much
ขอบคุณ มาก ครับ
ご清聴ありがとうございました

Number of Hiyari data

Target Aria (Square measure)	Total			Sex	Male		Female		Age	10-19		20-29		30-39		40-49		50-59		60-69		Transportation Mode	Car		Motorcycl		Walk	
Arouund Pithayanukhun High School in Udonthani (5km^2)	C:	118	(8)	M:13	111	(9)	7	(4)	20-29:5			27	(5)	34	(11)	22	(11)	3	(3)	7	(7)	Car:5	54	(11)	65	(7)	13	(13)
	M:	131	(9)	F:2	118	(9)	13	(7)	30-39:3			38	(8)	28	(9)	17	(9)	4	(4)	7	(7)	MC:9	49	(10)	71	(8)	13	(13)
	W:	72	(5)		68	(5)	4	(2)	40-49:2			14	(3)	24	(8)	5	(3)	6	(6)	7	(7)	Walk:1	37	(7)	32	(4)	6	(6)
	Total	321	(21)		297	(23)	24	(12)	50-59:1			79	(16)	86	(29)	44	(22)	13	(13)	21	(21)		140	(28)	168	(19)	32	(32)
Kaakheha community in Khon Kaen (Khon Kaen municipality) (2km^2)	C:	103	(6)	M:5	34	(7)	69	(6)	60-69:1					33	(8)	41	(7)	16	(5)	13	(4)	Car:6	151	(9)	59	(6)	25	(8)
	M:	126	(8)	F:11	34	(7)	92	(8)	30-39:4					45	(11)	48	(8)	18	(6)	15	(5)	MC:10	140	(10)	72	(7)	25	(8)
	W:	90	(6)		25	(5)	65	(6)	40-49:6					19	(5)	40	(7)	17	(6)	14	(5)	Walk:3	170	(7)	51	(5)	16	(5)
	Total	319	(20)		93	(19)	226	(21)	50-59:3					97	(24)	129	(22)	51	(17)	42	(14)		461	(26)	182	(18)	66	(22)
Kaakheha community in Khon Kaen (Mungkao county)(0.5km^2)	C:	205	(9)	M:12	122	(10)	21	(7)	60-69:3					34	(11)	69	(14)	55	(8)	31	(5)	Car:12	151	(13)	101	(9)	52	(9)
	M:	193	(8)	F:3	122	(10)	20	(7)	20-29:1			4	(4)	37	(12)	62	(12)	52	(7)	33	(6)	MC:11	140	(12)	106	(10)	53	(9)
	W:	249	(11)		136	(11)	45	(15)	30-39:3			3	(3)	38	(13)	78	(16)	64	(9)	43	(7)	Walk:6	170	(14)	131	(12)	71	(12)
	Total	647	(28)		380	(32)	6	(22)	40-49:5			4	(4)	109	(36)	209	(42)	171	(24)	107	(18)		461	(38)	338	(31)	176	(29)
Khon Kaen University (10km^2)	C:	178	(7)	M:20	144	(7)	34	(5)	50-59:7			11	(11)	0	(0)	36	(9)	13	(4)			Car:13	88	(7)	112	(7)	10	(5)
	M:	256	(9)	F:7	191	(10)	65	(9)	60-69:6					1	(1)	36	(9)	26	(9)			MC:17	115	(9)	164	(10)	21	(11)
	W:	63	(2)		49	(2)	14	(2)	10-19:1	7	(7)	114	(7)	0	(0)	6	(2)	8	(3)			Walk:2	34	(3)	37	(2)	5	(3)
	Total	497	(18)		384	(19)	113	(16)	20-29:17	12	(12)	173	(10)	1	(1)	0	(0)	78	(20)	47	(16)		237	(18)	313	(18)	36	(18)
Khon Kaen University (10km^2)	C:	371	(11)	M:24	302	(13)	69	(7)	30-39:1	1	(1)	45	(3)									Car:12	169	(14)	224	(10)	12	(12)
	M:	448	(13)	F:10	372	(16)	76	(8)	40-49:4	20	(20)	332	(20)									MC:23	98	(8)	314	(14)	48	(48)
	W:	177	(5)		140	(6)	37	(4)	50-59:3													Walk:1	53	(4)	138	(6)	2	(2)
	Total	996	(29)		814	(34)	182	(18)	10-19:6	28	(5)	182	(11)	64	(11)	93	(19)	4	(4)				320	(27)	676	(29)	62	(62)
Nonhoi community in Chiang Mai （0.5km^2）	C:	170	(7)	M:13	137	(11)	30	(3)	20-29:16	95	(16)	237	(15)	47	(8)	69	(14)	0	(0)			Car:16	111	(7)	86	(7)	14	(4)
	M:	136	(6)	F:9	101	(8)	33	(4)	30-39:6	16	(3)	108	(7)	28	(5)	25	(5)	0	(0)			MC:12	95	(6)	87	(7)	17	(4)
	W:	155	(6)		103	(8)	39	(4)	40-49:5													Walk:4	84	(5)	96	(8)	29	(7)
	Total	461	(19)		341	(26)	102	(11)	50-59:1	139	(23)	527	(33)	139	(23)	187	(37)	4	(4)				290	(18)	269	(22)	60	(15)
									60-69:5					25	(25)	264	(26)	18	(18)	33	(7)							

C:Car driver, M:Motorcycle driver, P:Pedestrian

Number of bracket shows average number per one participant and red means over average, blue means below average.

Study flow

Propose Conducting Method of Hiyari Map Development in Thailand

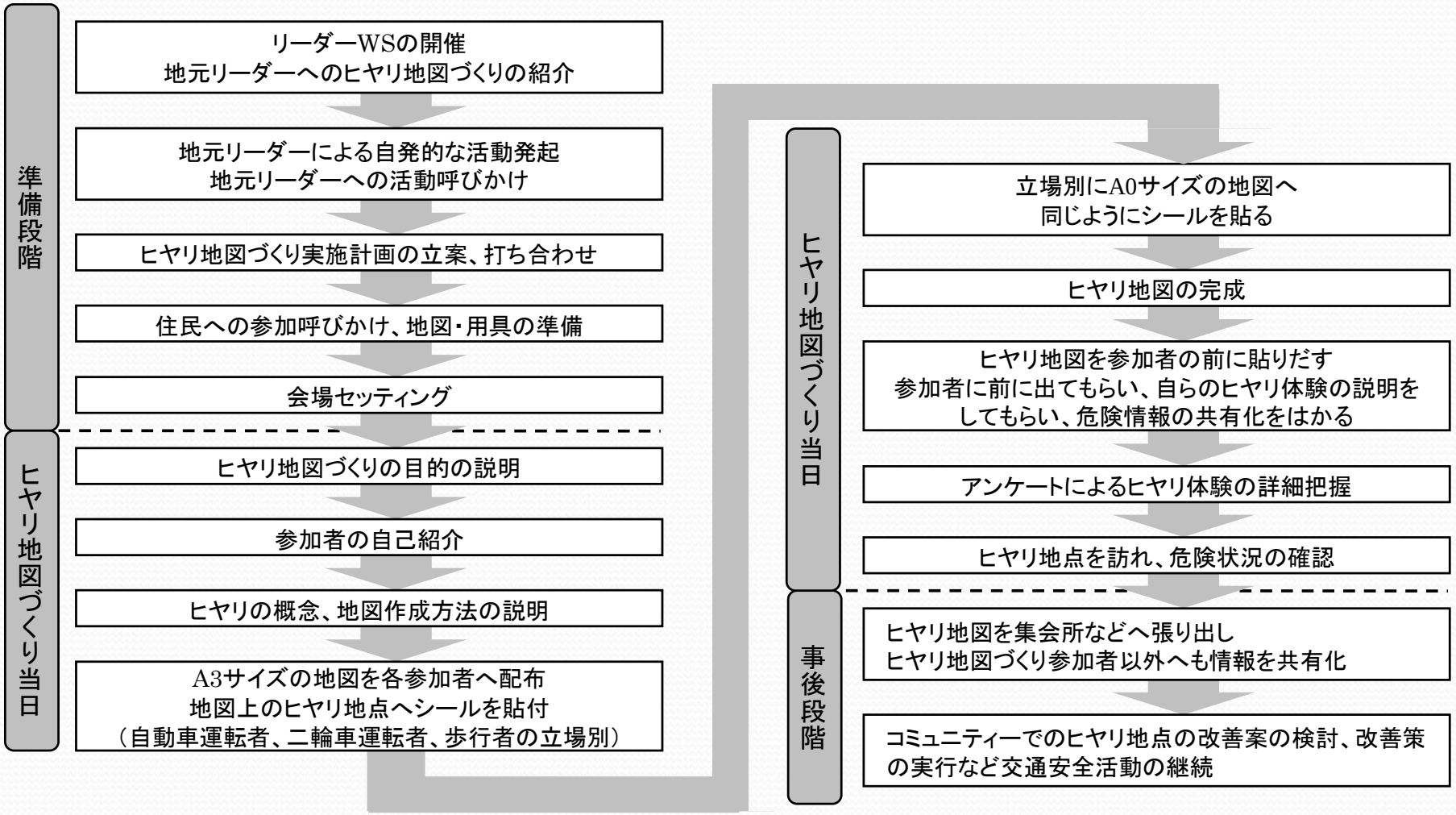
Organize Hiyari Map Development

Analyze Hiyari Data, characteristic of Hiyari data

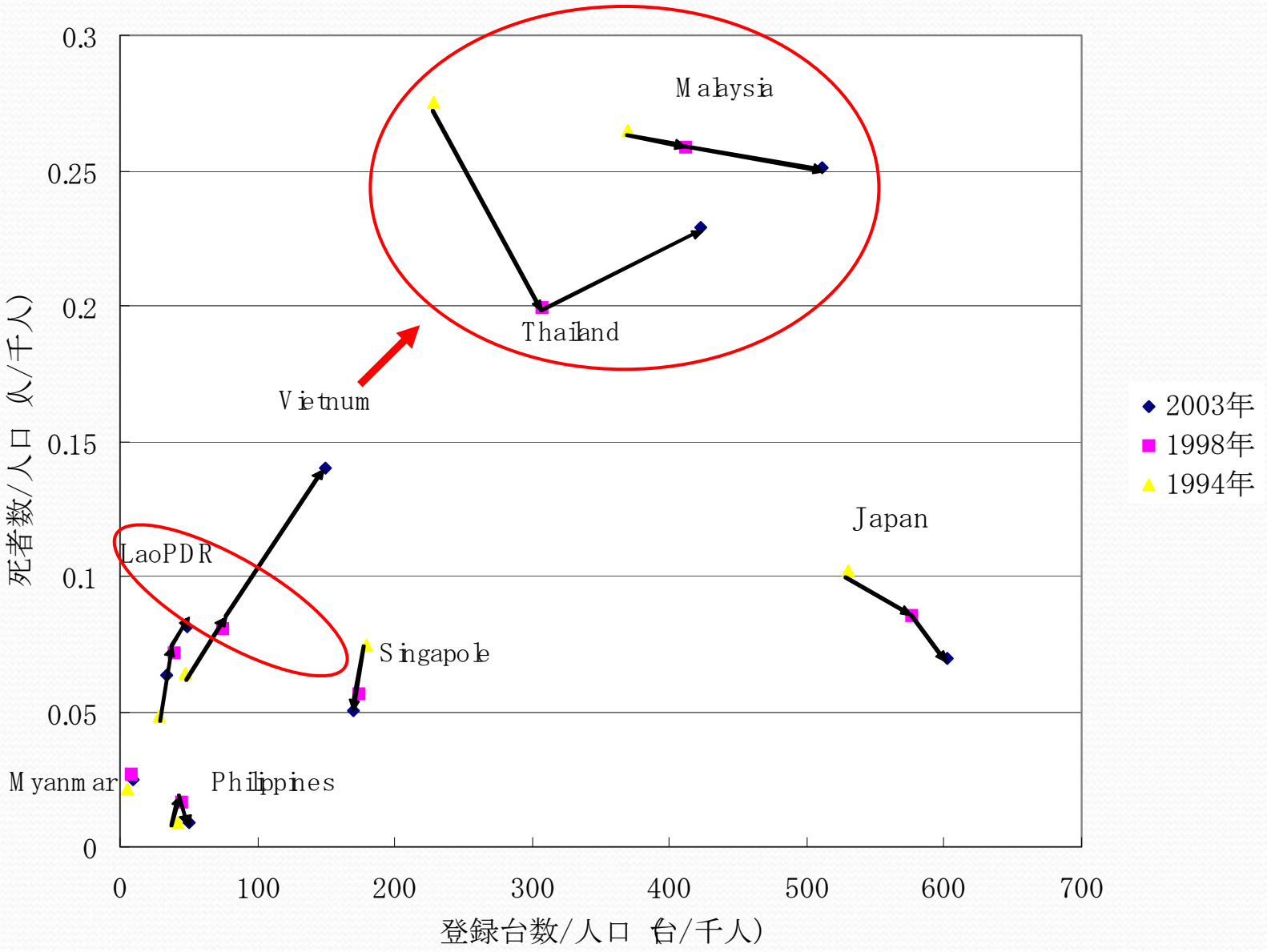
Identify Evaluation of Hiyari map development by questionnaire

Identify Effective of Hiyari map development for community

Process of Hiyari map development WS in Thailand



Traffic accident situation in Eastern Asian county



Arrangement of study

- To continue analyzing Hiyari data for confirm characteristics of data

- To confirm changing behavior of participants after the Hiyari map development

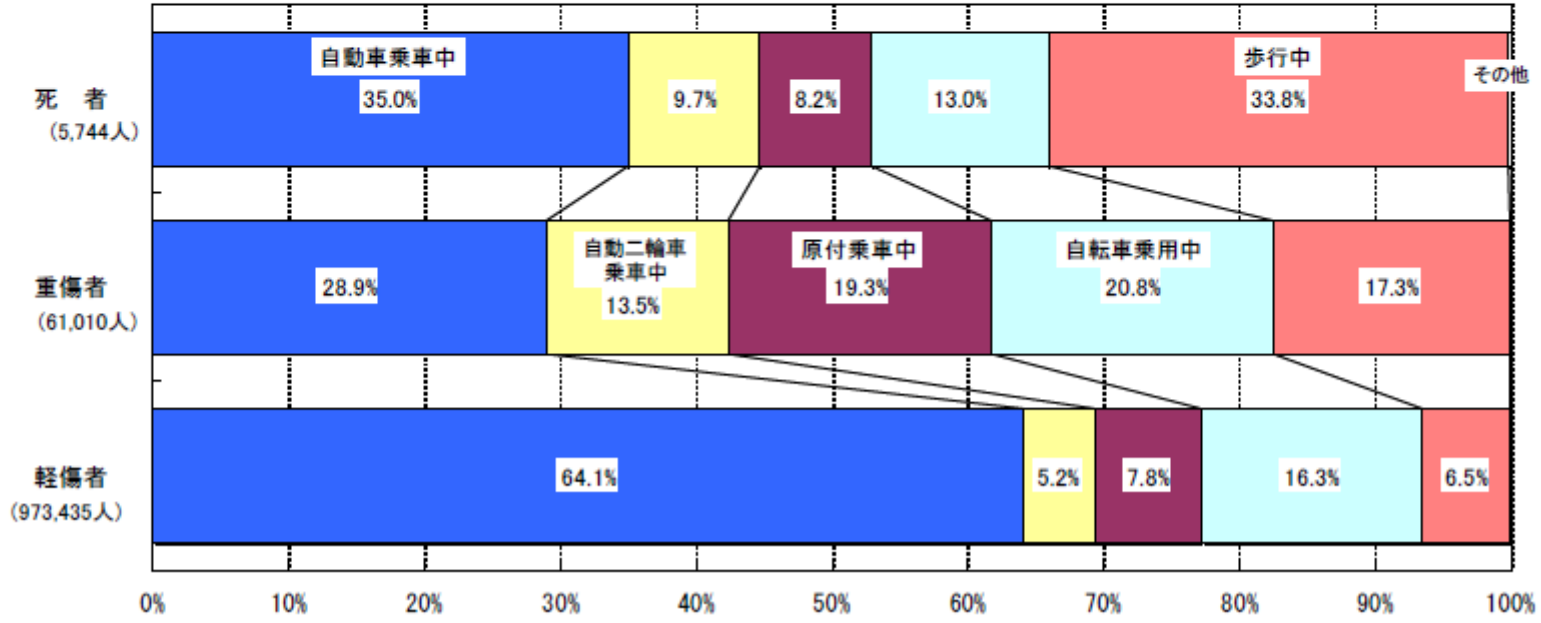
Traffic accident situation in Japan

◎　歩行中の致死率は全体の４．７倍。自転車乗用中の重傷者は増加傾向。

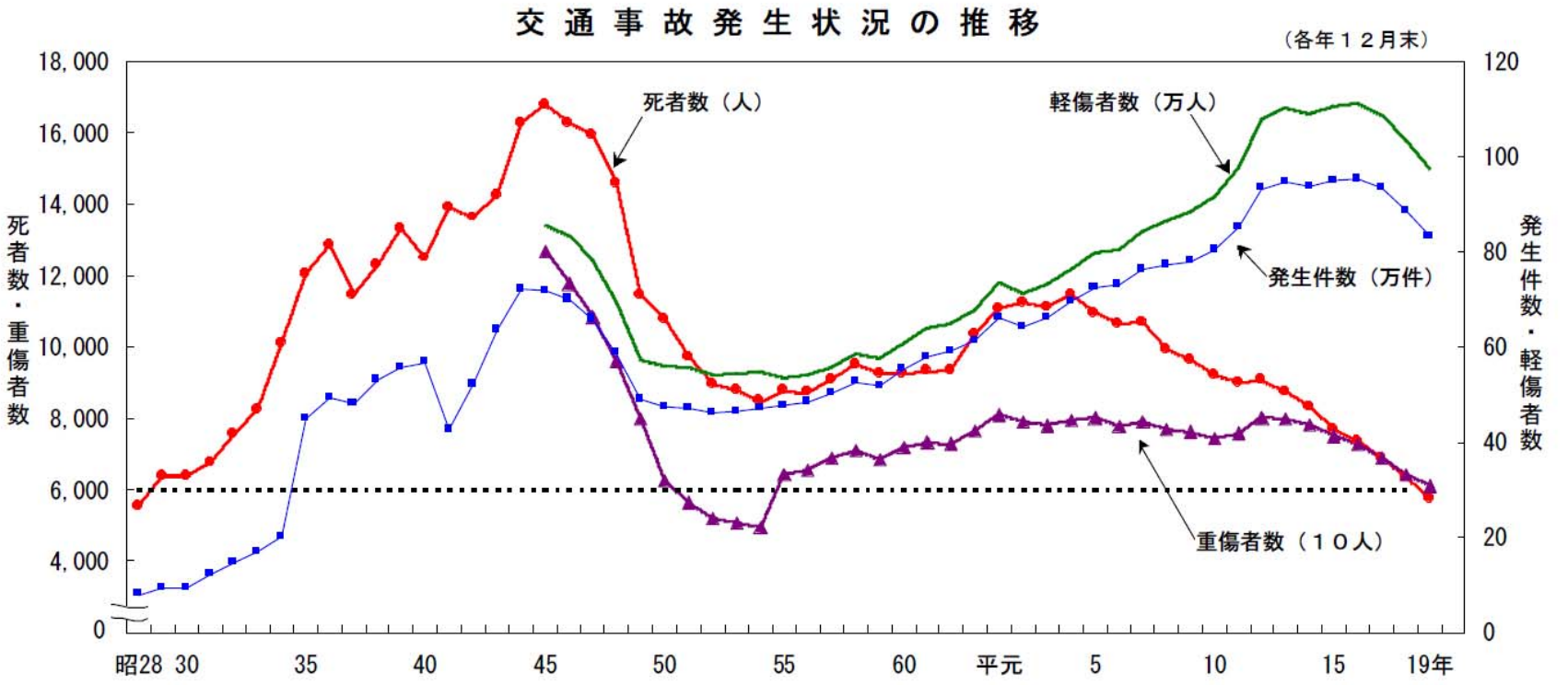
死傷者数を状態別・被害程度別にみると、自動車乗車中は、軽傷者の約３分の２（構成率６４．１%）を占めているほか、死者の３分の１以上（同３５．０%）、重傷者の約３割（同２８．９%）と各被害程度で多数を占めている。また、歩行中は軽傷者のうち１割以下（同６．５%）であるのに対して、重傷者では１７．３%、死者では３３．８%を占め、被害程度が深刻になるほど歩行中の構成率が高くなり、致死率も全体の４．７倍と高い。

軽傷者数及び重傷者数について、前年と比較すると、軽傷者では、自動車乗車中（前年比－４万８，３１４人、－７．２%）及び原付乗車中（同－４，５８８人、－５．７%）の減少が顕著であり、重傷者では、自動車乗車中（同－２，０８１人、－１０．５%）及び歩行中（同－６５８人、－５．９%）の減少が顕著である。

状態別死傷者の状況（構成率）（平成１９年中）



Traffic accident situation in Japan



注１　昭和３４年までは、軽微な被害事故（８日未満の負傷、２万円以下の物的損害）は含まない。
　２　昭和４０年までの件数は、物損事故を含む。
　３　昭和４６年までは、沖縄県を含まない。

出典：警察庁交通局「平成19年中の交通事故の発生状況」