

# 福島県北西部での第2回放射線調査 報告記者会見

国際環境NGOグリーンピース



# Greenpeace in Fukushima

## グリーンピースによる福島県での放射線調査



# Greenpeace 2nd monitoring mission

## 第2回放射線調査の目的

- Survey of surface contamination 地表の汚染調査
- Collection of samples for more detailed analysis of radionuclides 放射線核種の詳細調査のためのサンプル収集
- Food analysis 食品調査
- Soil sample analysis

土壌サンプル調査



# Equipment 計測機器

- LB 200 Becquerel monitor for testing of radioactive contamination in food

LB200ベクレルモニター(食品汚染調査用)

- Gamma spectrometer: Exploranium GR-135

ガンマ線スペクトロメーター

- Geiger counters: Radex

RD 1503, RadAlert

ガイガーカウンター

- Contamination monitors:

RADOS MicroCont,

Berthold UMO

- コンタミネーションモニター



# Food & soil analysis 食品・土壌調査

- 16 vegetables samples 16種類の野菜のサンプル

- Leaf vegetables 葉物

- Cabbage & broccoli

キャベツとブロッコリ

- Onions ニラ類

- 8 soil samples

8つの土壌サンプル

- 5 vegetables from supermarkets Fukushima city

福島市内のスーパーで購入した野菜5種



# Food analysis 食品安全分析

- All 11 samples from vegetable gardens or small farms contain radioactivity levels above limits
- 野菜畑や小規模農家から集めた11のサンプルすべてで基準を超える放射性物質を検出。

Date	Location description	Sample type	Activity (Bq/kg)	Error (Bq/kg)
04/04/2011	Mihamisoma vegetable garden 1	Chinese cabbage	8790	270
04/04/2011	Mihamisoma vegetable garden 2	Spinach	40240	2940
04/04/2011	Mihamisoma vegetable garden 2	Spinach	43482	3090
04/06/2011	Small Vegetable garden outskirts Fukushima	Kanshin mustard spinach	19940	165
04/06/2011	Small Vegetable garden outskirts Fukushima	Spinach	152040	10455
04/06/2011	Small Vegetable garden outskirts Fukushima	Komatsuna	73712	4585
04/06/2011	Small Vegetable garden outskirts Fukushima	Salad onions	20290	1850
04/06/2011	Small Vegetable garden outskirts Fukushima	Broccoli	16100	1145
04/07/2011	Eco-farm in Funahiki Town, Tamura city Fukushima prefecture	Komatsuna	23212	800
04/07/2011	Eco-farm in Funahiki Town, Tamura city Fukushima prefecture	Leaf vegetable	35600	995
04/08/2011	Small farm about 10 km N of Koriyama	Broccoli	18845	545
04/08/2011	Small farm about 10 km N of Koriyama	Chicory	26190	1175

# Food analysis

## 食品安全分析

- one vegetable bought in supermarket exceeds limits
- スーパーマーケットで購入した野菜のひとつが基準超え



Date	Location description	Sample type	Activity (Bq/kg)	Error (Bq/kg)
04/05/2011	Small supermarket Fukushima City	Spring oilseed	3403	179
04/06/2011	Small supermarket Fukushima City	Spring oilseed	1838	127
04/07/2011	From Tsukidate-machi Date-shi bought at Yoku Benimaru supermarket in Fukushima City	Salada onions (Nira)	1890	206
04/07/2011	From Ibaraki prefecture, bought at Yoku Benimaru supermarket in Fukushima City	White cabbage	836	86
04/07/2011	From Fukushima prefecture, bought at Yoku Benimaru supermarket in Fukushima City	Trefoli	158	63

# Soil analysis 土壤安全調査

- High radioactivity in top layers of soil 高い数値。地表に放射性物質が残っている。
- Surface contamination: total activity 2700 kBq/m<sup>2</sup>  
地表汚染: 合計2700 kBq/m<sup>2</sup>
- More detailed analysis necessary
- さらに詳細な調査が期待される

Date	Location	Act in uSv/h at location	Act in uSv/h on sample	Activity (Bq/kg)	Error (Bq/kg)	Description
04/04/2011	Mitama-sona vegetable garden:2	1.89	10.29	48626	1480	
04/06/2011	Small Vegetable garden outskirts Fukushima	1.86	11.25	17410	1195	Top soil 0-5 cm
04/07/2011	Rice field NE of Fukushima City close to Hobara	2.74	10.28	66145	7795	
04/07/2011	Rice field N of Iitate village	5.92	0.26	30950	6455	10x10cm, 3cm layers 0-3 cm depth
04/07/2011	Rice field N of Iitate village	5.92	0.25	10155	405	3-6 cm depth
04/07/2011	Rice field N of Iitate village	5.92	0.15	1450	75	6-9 cm depth
04/08/2011	Small farm about 10 km N of Koriyama	1.2	11.25	32980	3530	Top soil
04/08/2011	Small farm about 10 km N of Koriyama	1.4	1.8	3.1		No readings as maximum limit measurements was exceeded.



# Conclusions sample testing

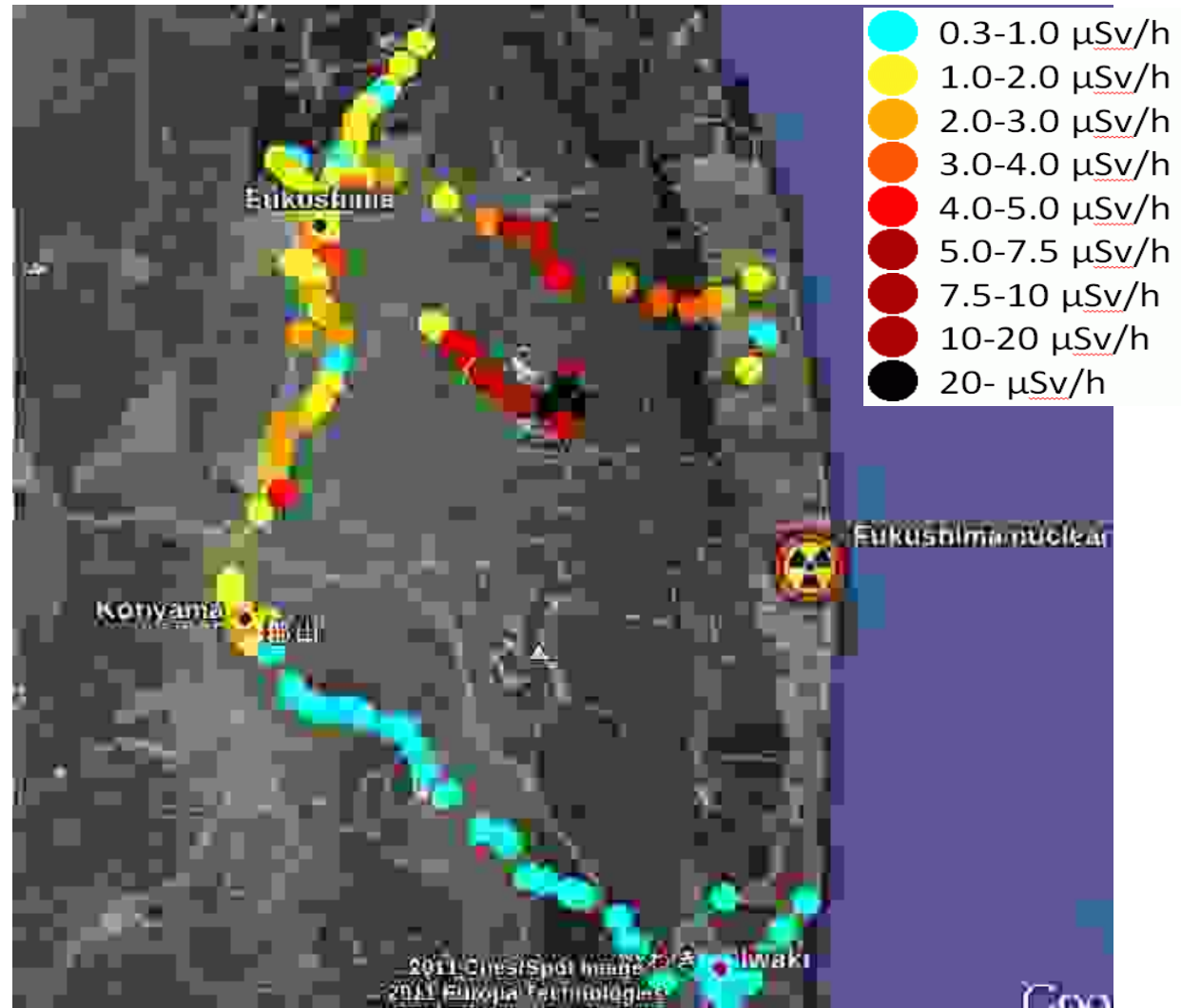
## 結論とサンプルテスト

- Serious concerns about food & soil contamination  
食品と土壌への重大な懸念
- Additional protection measures needed  
さらなる保護策が必要
- Protect consumers & farmers  
消費者と農家を守る
- Extensive monitoring  
集中的なモニタリング
- Full transparency  
高い透明性

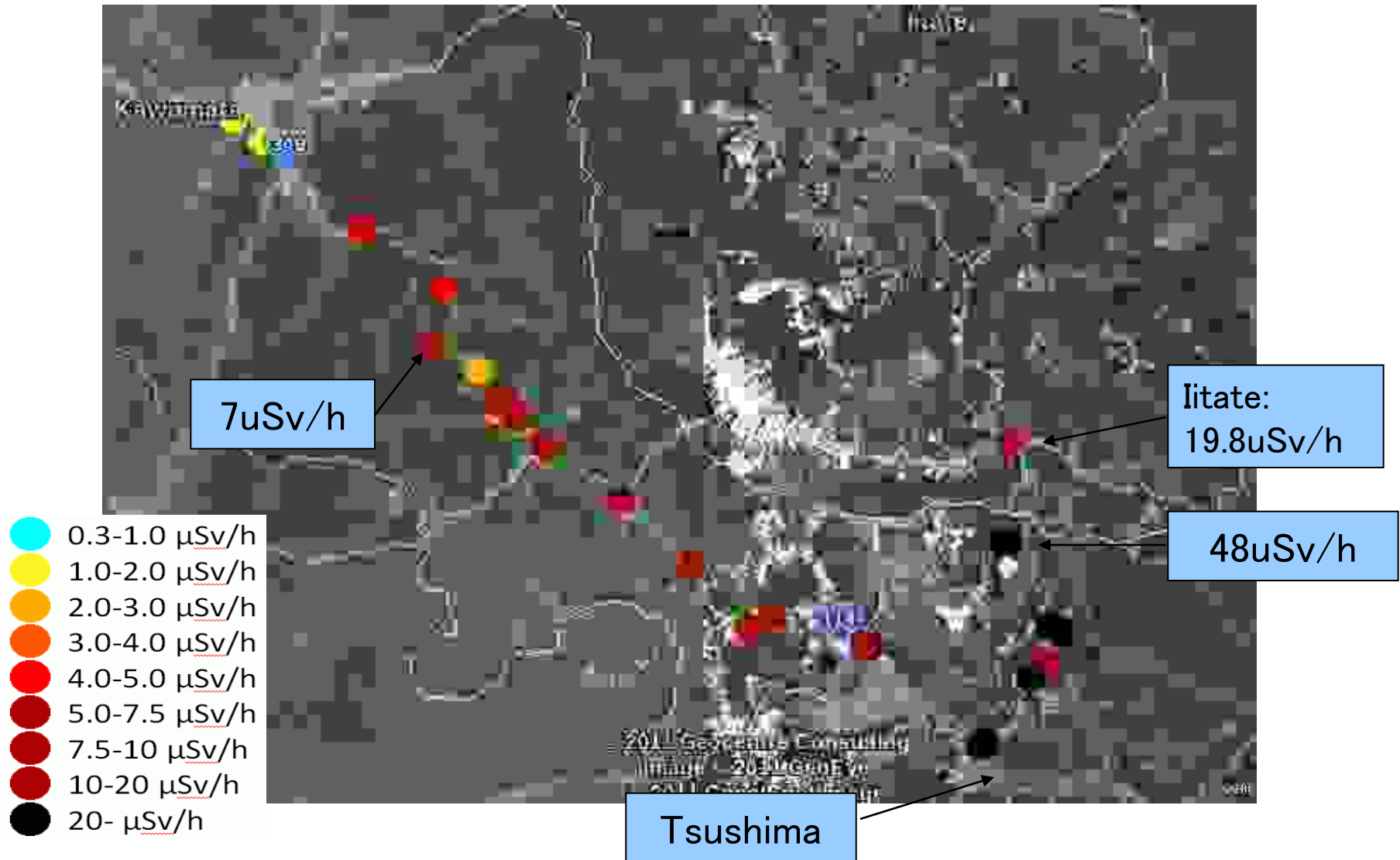


# Mapping of Dose Rates 放射線量分布地図 in Fukushima Prefecture 福島県 (5 – 9 April 2011)

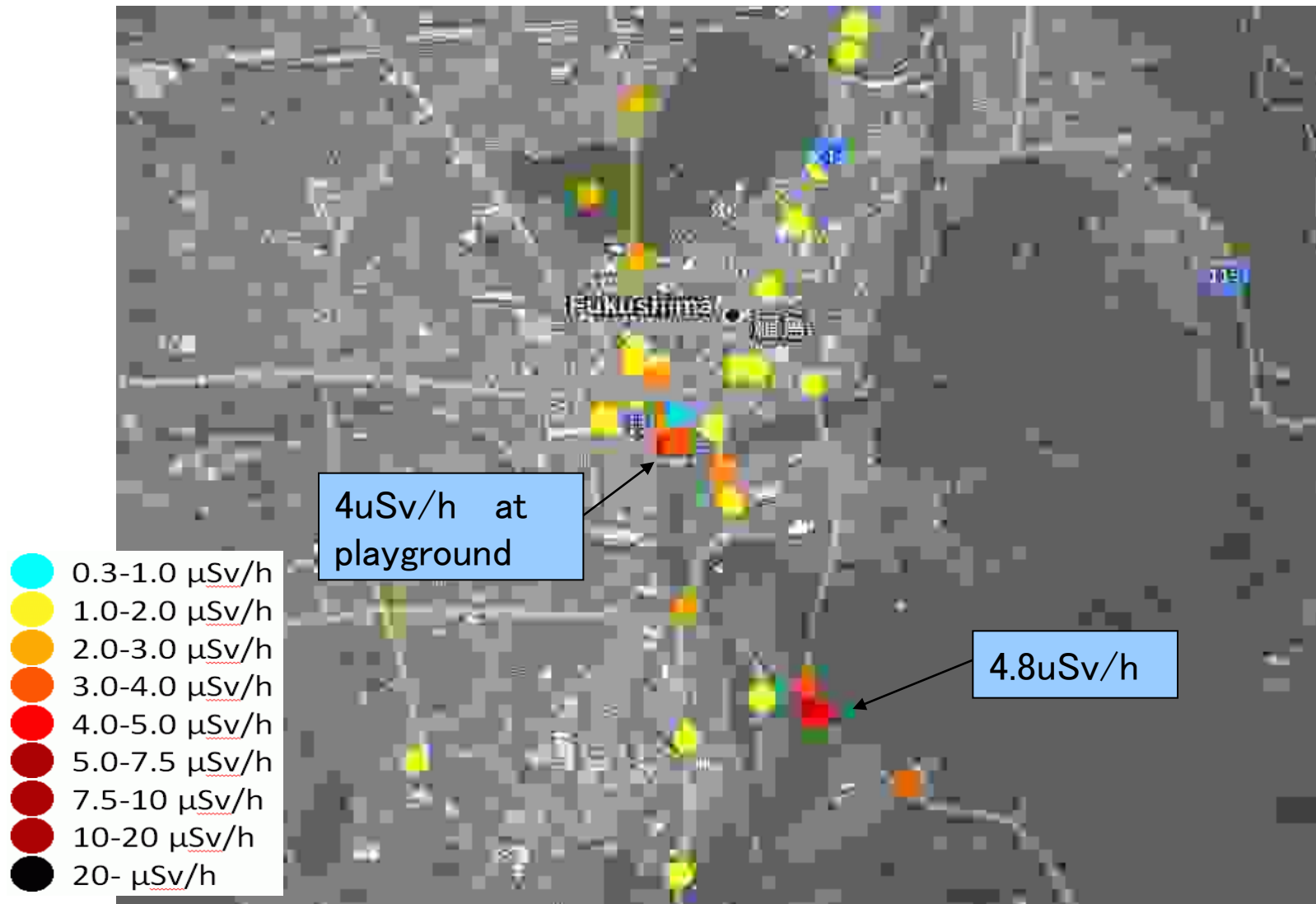
- 261 measuring points  
261地点で測定
- Dose Rate in  $\mu\text{Sv/h}$   
and cps for Cs-137  
線量を $\mu\text{Sv/h}$ で、  
セシウム137を  
カウント毎秒cpsで計測
- High contamination in  
Fukushima city and  
Koriyama  
福島市と郡山市で高い値
- Highest in NW region  
北西地点で高い値



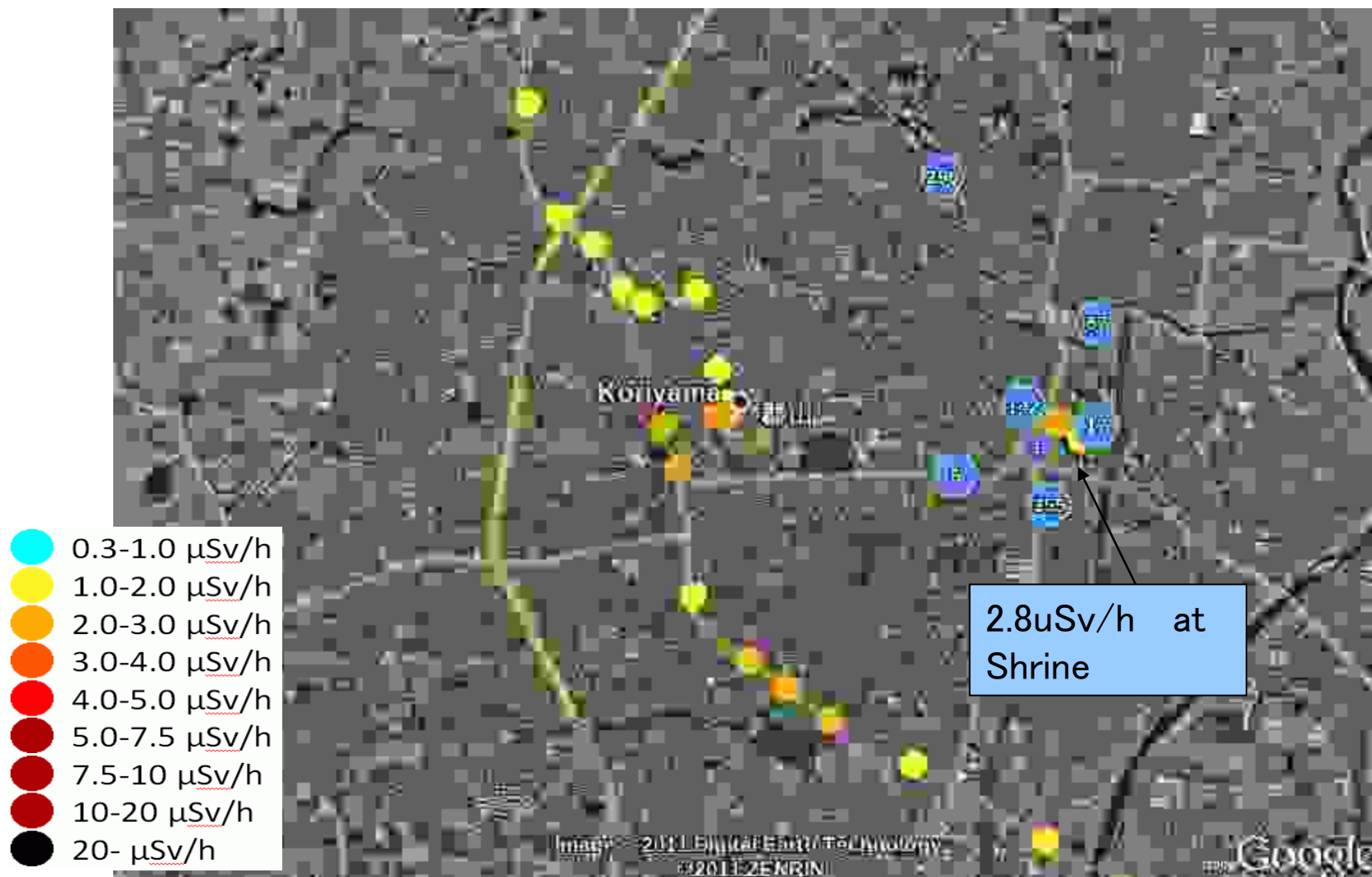
Tsushima – Kawamata – Iitate (津島、川俣、飯舘)



# Fukushima City (April 5th) 福島市 (4月5日)



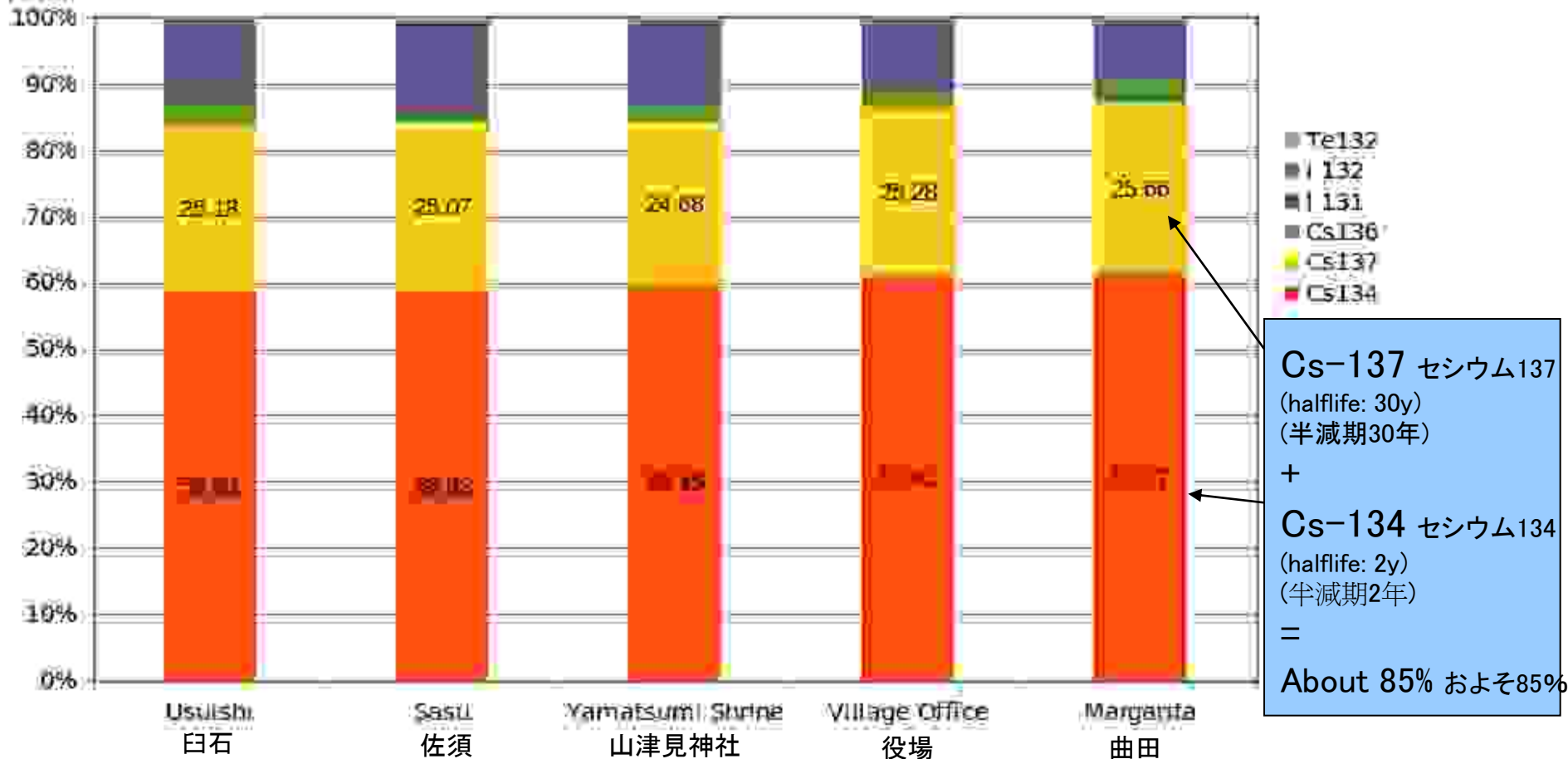
# Koriyama City 8 April (郡山市 4月8日)



# Composition of total dose rate after 30d

(30日後の線量の構成: 京都大学のグループが行った5つのサンプルから)

Dose Rate from key isotopes after 30 days  
(based on 5 samples from Kyoto University)

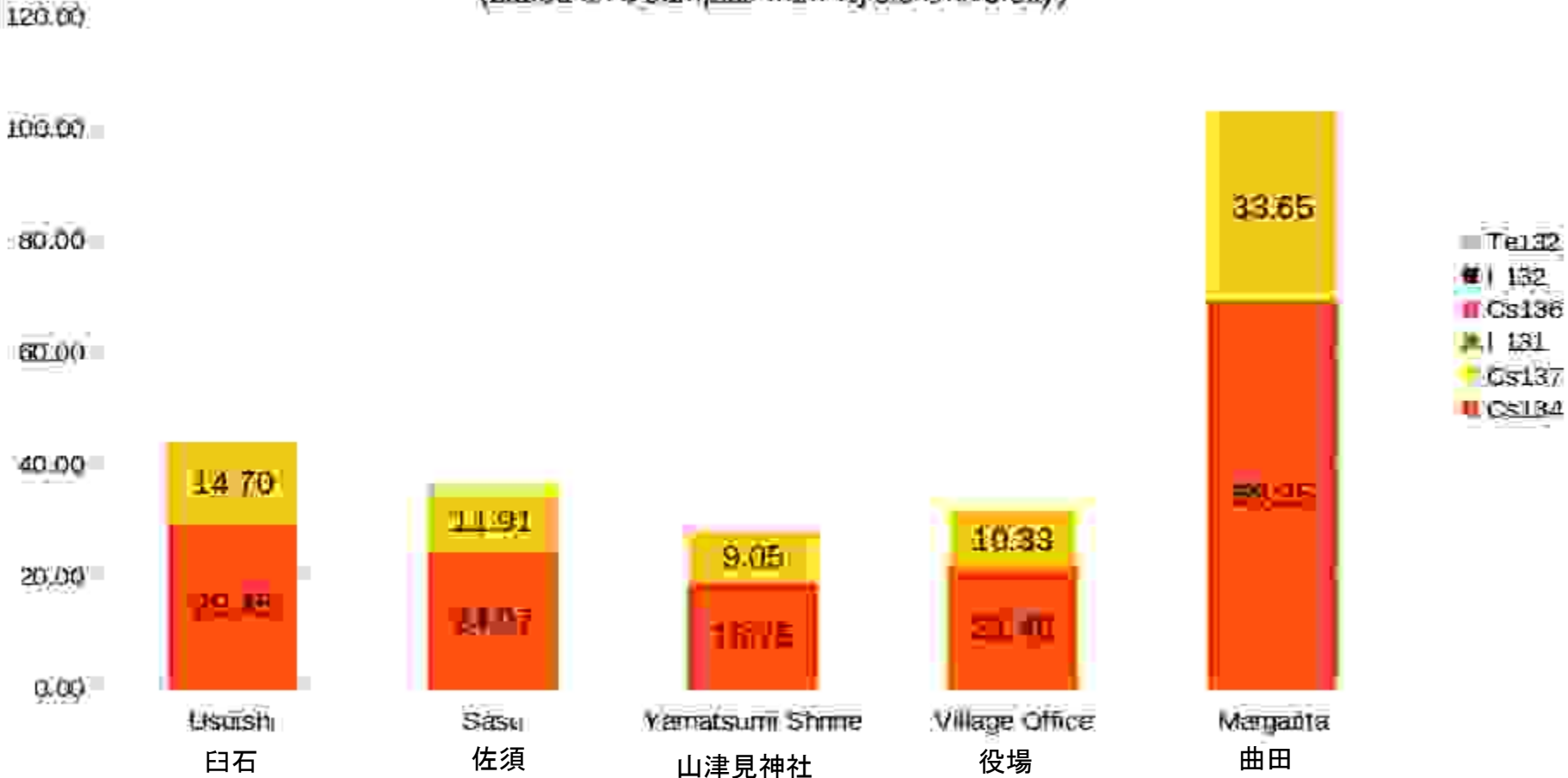


Based on soil sample analysis by Kyoto University Research Reactor Institute, 4 April 2011  
calculation based on German authority Strahlenschutzkommission (SSK), Heft 37, 2003.

# Total dose day 25- rest of year at litate (mSv)

(事故発生後25日以降から1年後までの積算線量:今避難すれば避けられる線量 単位:ミリシーベルト)

Dose that still can be avoided by evacuation after 25 days till one year after the accident  
(based on 5 samples from Kyoto University)



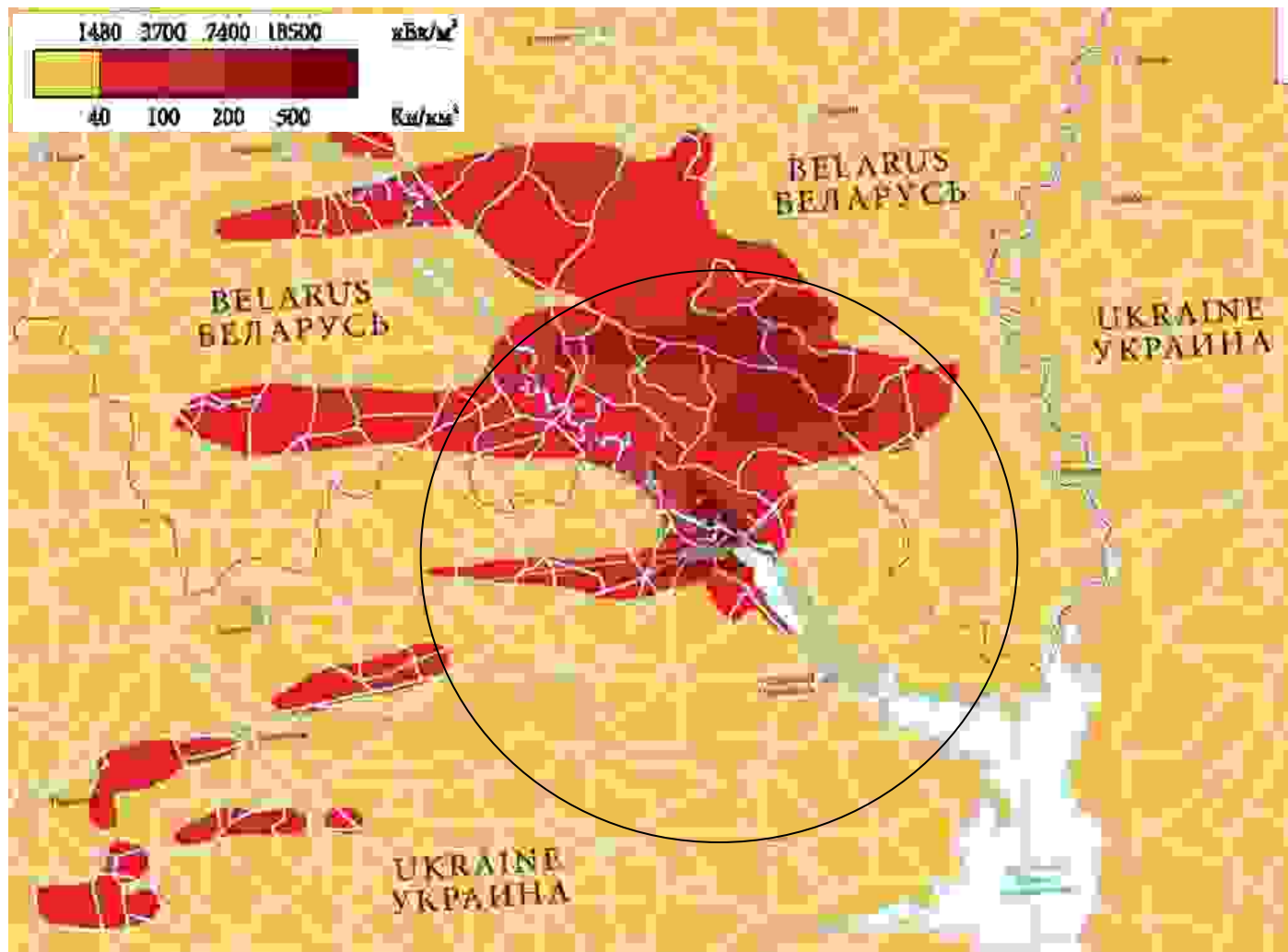
Based on soil sample analysis by Kyoto University Research Reactor Institute, 4 April 2011  
calculation based on German authority Strahlenschutzkommission (SSK), Heft 37, 2003.

Measures after Chernobyl accident: チェルノブイリ事故後の措置基準

Summary of measures in Belarus, Ukraine, Russia [UNDP, 2002]	
Contamination density by $^{137}\text{Cs}$ (kBq/m <sup>2</sup> )	designation of zones
37-185	Zone of enhanced radiological control
185-555	Right to resettle (if dose > 1 mSv/year)
555-1480	Zone of secondary resettlement mandatory if dose > 5 mSv/year
> 1480	Zone of planned resettlement mandatory if dose > 5 mSv/year



Cs-137 deposition maps (チェルノブイリ付近におけるセシウム137の分布)  
Chernobyl zone



# Greenpeace's Reaction

## グリーンピースの考え方

- Understanding the challenges the government faces with earthquake, Tsunami, and
- 地震、津波、原発に対応するという困難な時期であることを理解
- Priority is the safety of the affected residents
- 住民の健康を最優先として考慮

# •Demands to the government

## 政府への要請

- 83.3% of evacuees said that there is not enough information from the government or local authorities regarding radiation contamination.
- 83.3%の避難者が政府や自治体から伝えられる放射能汚染の情報が十分でないと証言
- That there is not enough research data by the authorities
- 政府や自治体の調査データが足りていない
- That there is not enough appropriate actions by the government according to the scientific data
- 科学的データに基づく、適切な措置が行われていない。
- The government must minimize the accumulated dose of the affected population.
- 政府は、積算線量を最小限にすることが責務
- 4 points of demands 政府に4項目を要請