

Empathy & Collaboration

**Our Challenge toward
the Resurrection of Life & Industry
in Iitate Village**

November 10, 2014

NPO Resurrection of Fukushima, Director
Mountain Protector, Farmer

Muneo Kanno

We must protect gifts from the earth which are blessings from nature.

□ Iitate - Nature-rich Village

Known as “One of the most beautiful 100 villages of Japan”



Spring



Summer



Autumn



Winter

Life and Industry which cultivate lives
under blessing of nature



Rice Cultivation



Stock Raising-Iitate cattle

□ Contents

Process up to Now

Challenge 1 : To know the exact situation of Nuclear Contamination

Challenge 2 : Recovery of Home Land and Farm Land

Challenge 3 : Recovery of Agriculture

Challenge 4 : Recovery of Industry

Challenge 5 : Activities for Health and Medical Care

Challenge 6 : Dispatching Message to the World

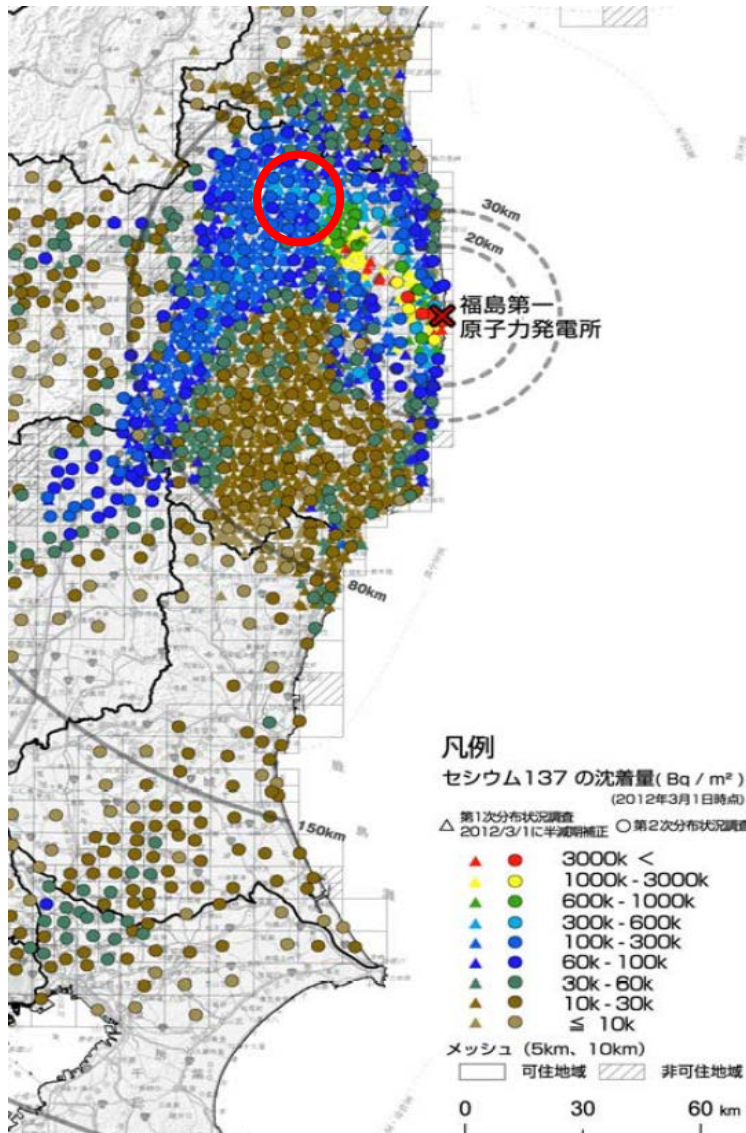
Challenge 7 : What is the Resurrection of Fukushima, Iitate Village?

Conclusion

❑ Accident of Fukushima No.1 Nuclear Power Plant, March 14th 2011



□ Contamination of Soil of Iitate Village

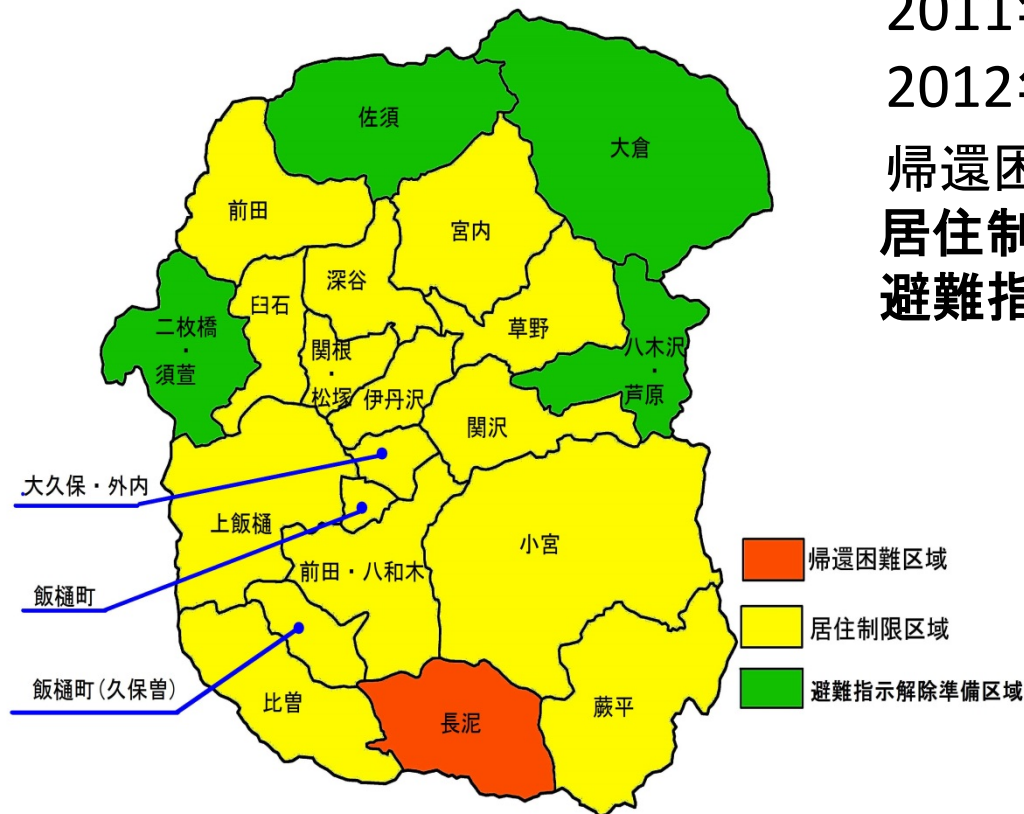


- Contaminated by Cesium 137
- in Iitate Village ;
 $30,000\text{Bq/m}^2 \sim 1,000,000\text{Bq/m}^2$
- Can they go back to the village?
- Can they restart agriculture?

セシウム137の各種分析結果(文科省による調査結果 2012年3月1日時点)
http://radioactivity.mext.go.jp/ja/contents/7000/6213/24/338_0912_18_rev0914.pdf

現状

飯舘村は避難指示区域



2011年4月計画的避難区域

2012年7月 3区分に再編成

帰還困難区域（推定年間50mSv超）

居住制限区域（同 20mSv～50mSv）

避難指示解除準備区域（同 20mSv以下）

- 村内活動には制限
- 除染は国の責任で行う
- 2014年度 居宅除染
- 2015年度から農地除染
- 山林除染はしない
- 各地区田圃に仮々置き場
- 賠償は不確定
- 専門的な知識が必要

被災者自身が手を出せない状況

❑ Encounter of “Resurrection of Fukushima” with Iitate Village

- Yoichi Tao ,Director of “Resurrection of Fukushima” , and other 15 members visited Iitate Village in June 2011 and offered their support.
- Came to an accord on following points.
 - Accident of Fukushima No.1 Nuclear Power Plant was obviously man-made disaster.
 - Nuclear Power Plant should have technology for restoring accident.
 - Government should take necessary measures which villagers can go back and work the earth.
 - This issue is world issue, not Fukushima’s only.
 - We supply all the data to administration and make proposal for resurrection.
 - We agreed to make investigations and experimentations using houses which families are away, farmland and forest.
- The project started as “Resurrection of Fukushima”.

Then we started our collaboration.

□ What is “Resurrection of Fukushima” ?

■ Object

Resurrection of life and industry of disaster stricken area where destructed by the accident of nuclear power plant.

■ Management

- Managed by volunteers and farmers
- Funded by membership fee and contribution
- NPO in July, 2012
- Individual member 250, Corporate member 6-groups (as of December, 2012)
- Corporate with research institutes and university laboratories.

■ Principle for our activities

- At the disaster-attacked sites
- Collaborate with farmers
- With continuity

■ Major activities at present

- Radiation measure and analysis of radioactivity
- Experimentation of decontamination – housing, farm land and forest-
- Measure and experiment for resurrection of agriculture
- Dispatching information to the world
- Care for the victims

Empathy & Collaboration Resurrection of Fukushima

Goal: Recovery of the area

- Collaboration
- Independent Volunteers
- Vitality from the varieties of participants
- Knowledge, technics, work experience, network
- Breadth of vision
- Flexible handling
- Detailed care

Power for Recovery
Experience, knowledge,
Tradition, culture, wisdom

Villagers

Collaboration
ColCollaboration against
Scattering laboration

**Empathy &
Collaboration**



**Resurrection
of Fukushima**

Non-Profit Organization

Specialists
Science & Technology
**Universities/
Research Institute**

Interdisciplinary
Collaboration

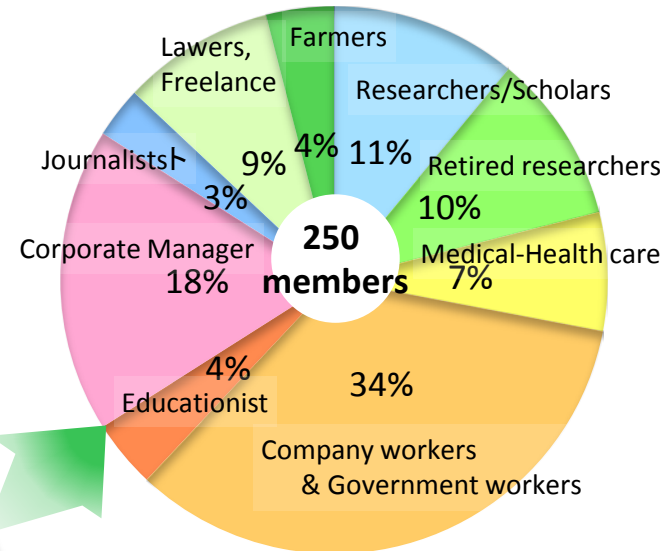
Public Service

**National
Prefectural
Local**

Overcome Sectionalism
& Bureaucratism

Member's Structure

Feb. 2014



❑ Challenge 1: To know the exact situation of Contamination

◆ Development of Radiation Monitor

As GPS and dose rate meter are built-in, this monitor can register the position and measure doses of radiation automatically.

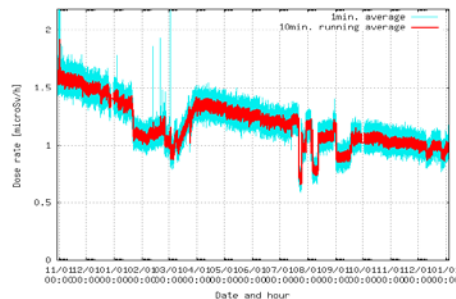


◆ Fixed Point Observation of Dose Rate

Record weather data and dose rate data, and transmit to server

◆ Making Dose Rate Maps

Measured by villagers themselves and Making precise Dose Rate Map



❑ Challenge 1: To be continued

◆ Measure radioactivity of “Aerosol” in the air

“Aerosol” is a colloid of fine solid particles or liquid droplets, in air or another gas.

Measure radioactivity of aerosol continuously by high-volume-air samplers

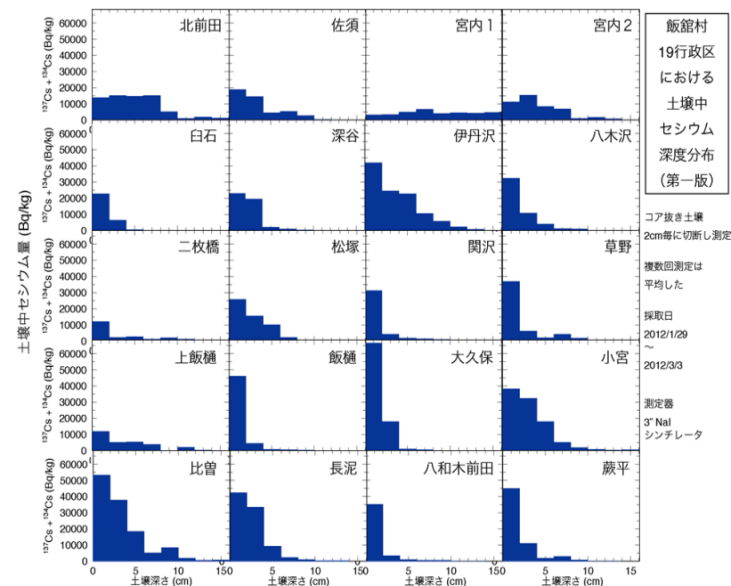


No	Date/time	m ³	Bq/m ³		
			Cs-134	Cs-137	Total
No.1	Mar.20 14:10 - Mar.31 11:46	7847.6	0.000328	0.000484	0.000812
No.2	Mar.31 11:50 - Apr.8 17:28	5926.2	0.00165	0.00233	0.00398
No.3	Apr. 8 17:40 - Apr. 14 11:00	4122.2	0.0005	0.000697	0.0012

◆ Analysis of radioactivity of soil in the farm land

Measure radioactivity in the soil of farm land to 15cm depth take in samples every 2cm depth sampling at 20 spots in the village

Soil sampling gathered with a soil sampler



□ Challenge 1: To be continued

◆ Wild Boar Project



- Monkeys and wild boars are increasing in numbers in the uninhabited villages.
- Wild boars ruin farm land and decontamination works of farm land becomes difficult.
- It is said spoil pollution by wild boars is still lasted in Europe after Chernobyl.
- Capture and dissect wild boars and measure radioactivity of body parts .

**Collaboration of Department of Agriculture, the University of Tokyo
and Villagers**

We will continue such measurement.

□ Challenge 1: To be continued

◆ Organization for Continuous Measurement

- Making data-base and dose rate maps from the data which farmers , volunteers and specialists measure
- Making data-base from data of radioactivity of soil, crops ets
- Supervision of data by specialist
- Establishing Collaborating Firm by villagers in near future which control, analyze and supply such information to villagers

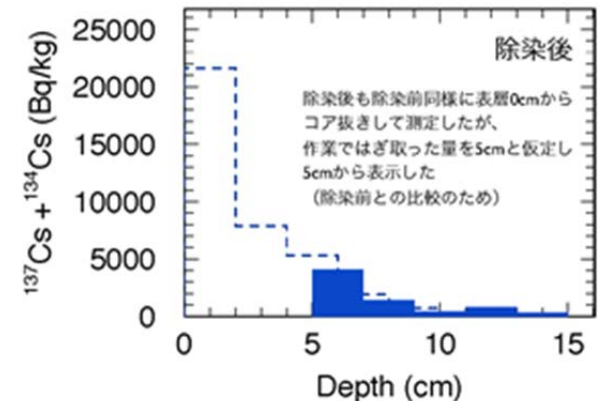
Establishing the Collaborating, Reliable Monitoring System

Challenge2: Recovery of Home Land and Farm Land

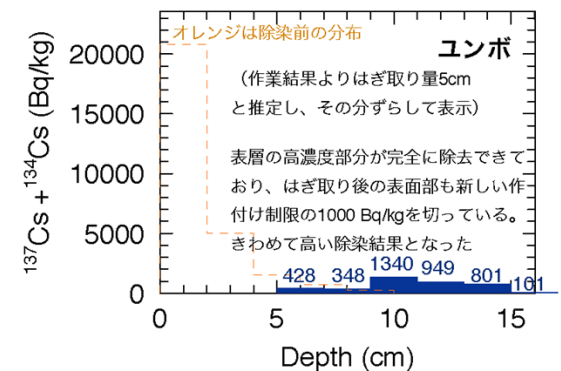
Development of decontamination method which can be carried out by villagers themselves

◆ Experimentation of Decontamination of Farm Land - 1

- Water is drawn in the farm land and washed away in 5cm thickness as muddy water.



- Peeling off in 5cm thickness of the surface by power shovels.



❑ Challenge2: To be continued

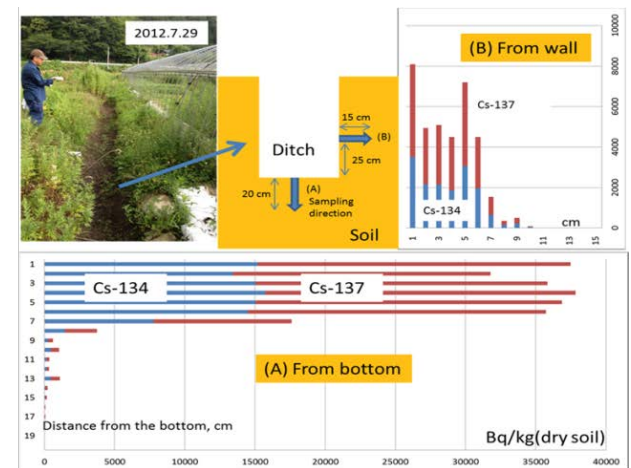
◆ Experimentation of Decontamination of Farm Land -2

When 5cm thickness of soil be frozen, it is peeled off and laid under the ground



◆ Disposal of contaminated Soil

Result of measurement of radioactivity in each depth. Sampling muddy water which accumulated in the ditch and the bottom and the sides to be measured separately after drying out.

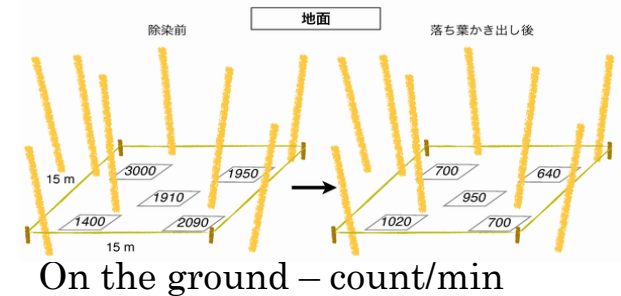
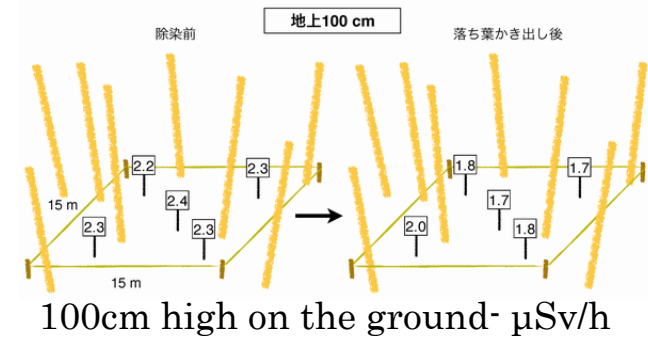


Cesium does not soak in to the soil !

Challenge2: To be continued

◆ Decontamination of Forest

- Experimentation of decontamination of fallen leaves of broad-leaved trees



◆ Decontamination of Housing



Woods in the backyard seems to affect dose rate of the house



Pruning trees

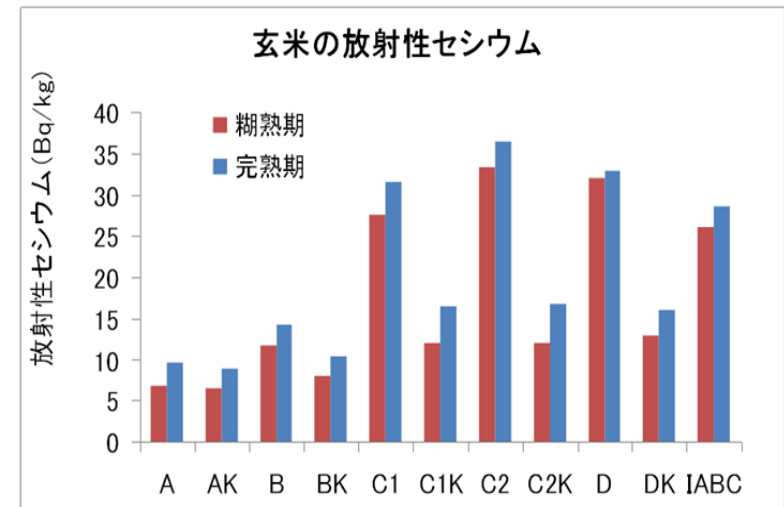


Maintenance of drainage ditch in the backyard

□ Challenge 3: Recovery of Agriculture

◆ Experimental Rice-Planting

- Rice planting prohibited in Iitate Village as this area is under evacuation order
- The experiment rice planting has been initiated under the agreement with agriculture research organization in Tsukuba



- brown rice: under 40Bq/kg
- white rice: under 10Bq/kg



Challenge 4: Recovery of Industry

- Installation of small size hydroelectric power generation
“Piko-Pika (light of resurrection)”



□ Challenge 5 : Activities for Health and Medical Care

- Practical activities like visiting examination care and nutrition education started by medical doctors, social workers, psychology counselors and areal supporters
- Health promotion program of evacuated residents consist of walking, muscle training and stretching exercise



❑ Challenge 6 : Dispatching Message to the World

- Fukushima accident is a global issue
- Actuality of Fukushima is hard to be understood in the world
- Dispatch message using ICT

Debates among foreign students in Japan and Iitate Villagers using Skype and Ustream.



Health consultation of evacuated residents using Skype



Held “Let’s talk with Iitate Villagers” in Tokyo.
(Relayed by Ustream – more than 6,000 viewers in total)

□Challenge 6 : To be continued

- ◆ SGRA Study Tour to Iitate Village, The 1st Tour(Oct.,2012) , The 2nd Tour(Oct.18~20,2013) 34 members from Korea, Singapore, Norway, Taiwan , China, Philippine, Spain, Germany, Hungary , Syria, US and Japan



in front of Nagadoro Barricade



Three elementary schools are evacuated



Visit and talk at farmer's house

- ◆ **Sweden has been suffering from Chernobyl disaster.**

- The group members are local community leaders, firemen, nurses and civil volunteers.
- Swedish Embassy inquired about us to coordinate their visit of Iitate Village



Visit and talk at farmer's house



in the forest near by farmer's house

Challenge 7 : What is the Resurrection of Fukushima, Iitate Village ?

■ Existing Situation of Fukushima, Iitate Village

- Run 2 years and 11 months, since the disaster
- All villagers are still refugees in the temporary housing and other location
- No clear accomplishment of decontamination process and no clear vision for restarting life and farming
- Non-responsive government
- Villagers are scattered and mentally driven into an unavoidable corner
- “Barrier to recovery” is becoming higher and higher

◆ Need to develop actions to overcome

Challenge 7 : To be continued

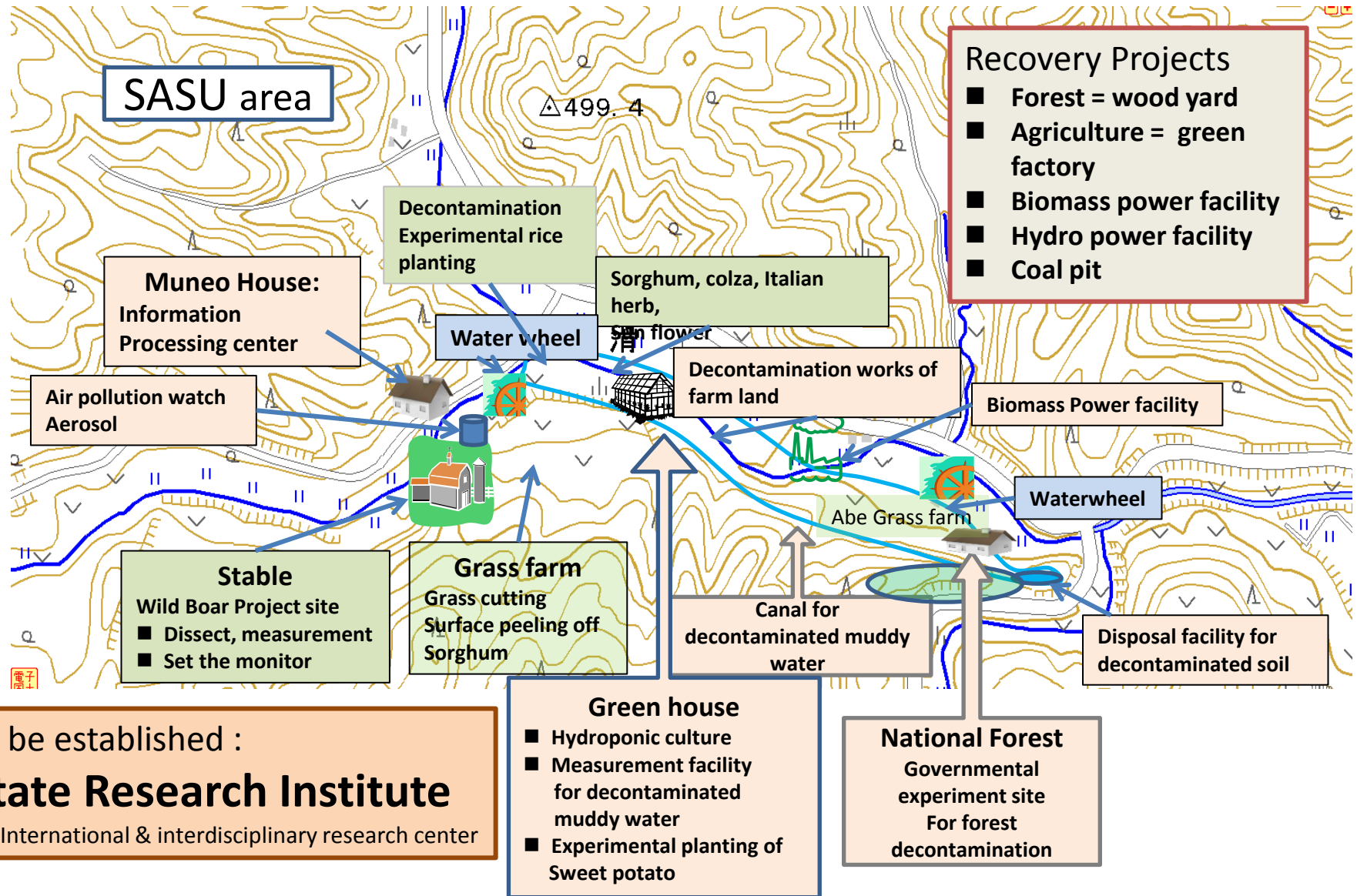
■ The Meaning and the Significance

- MADEI means gentry, politely, slowly
- To boost MADEI life of the Village
 - Respect for the local tradition and culture
 - Reconstructing gentle & careful life style, harmonization with nature
- Meaning & Significance to 21st Century
 - Doubt about “economic growth and science-technology “supremacy of this modern world
 - Our planet is facing a deadlock
 - Constructing New GOALs of our global society
- Aiming for “ sustainable life and industry ”
 - Iitate village is in the forefront to prove the new paradigm of new goals.
 - Iitate is trying to overcome global issues:
Food shortage, Energy Crisis, Aging society problem etc.



Challenge 7 : continued

“Madei Farm” in Iitate : a realistic road map for resurrection



□ Conclusion

- Visit and Look at the site, and listen to the voices of villagers.
- Study comprehensive and appropriate technologies which help the site.
- “Collaboration” which surmounts areas and organizations.
- There is key in the wisdom of villagers.
- Gather what we can do.
- Mobilize all talent and knowledge

**Act as quickly as possible
Empathy & Collaboration**

**Iitate Research Institute to be established as
An International & Interdisciplinary research center**

Thank you !





Official Homepage

<http://www.fukushima-saisei.jp>

facebook <Resurrection of Fukushima | ふくしま再生の会>

<http://www.facebook.com/user/FukushimaSaisei>

YouTube <fukusimasaisei>

<http://www.youtube.com/user/fukusimasaisei>

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