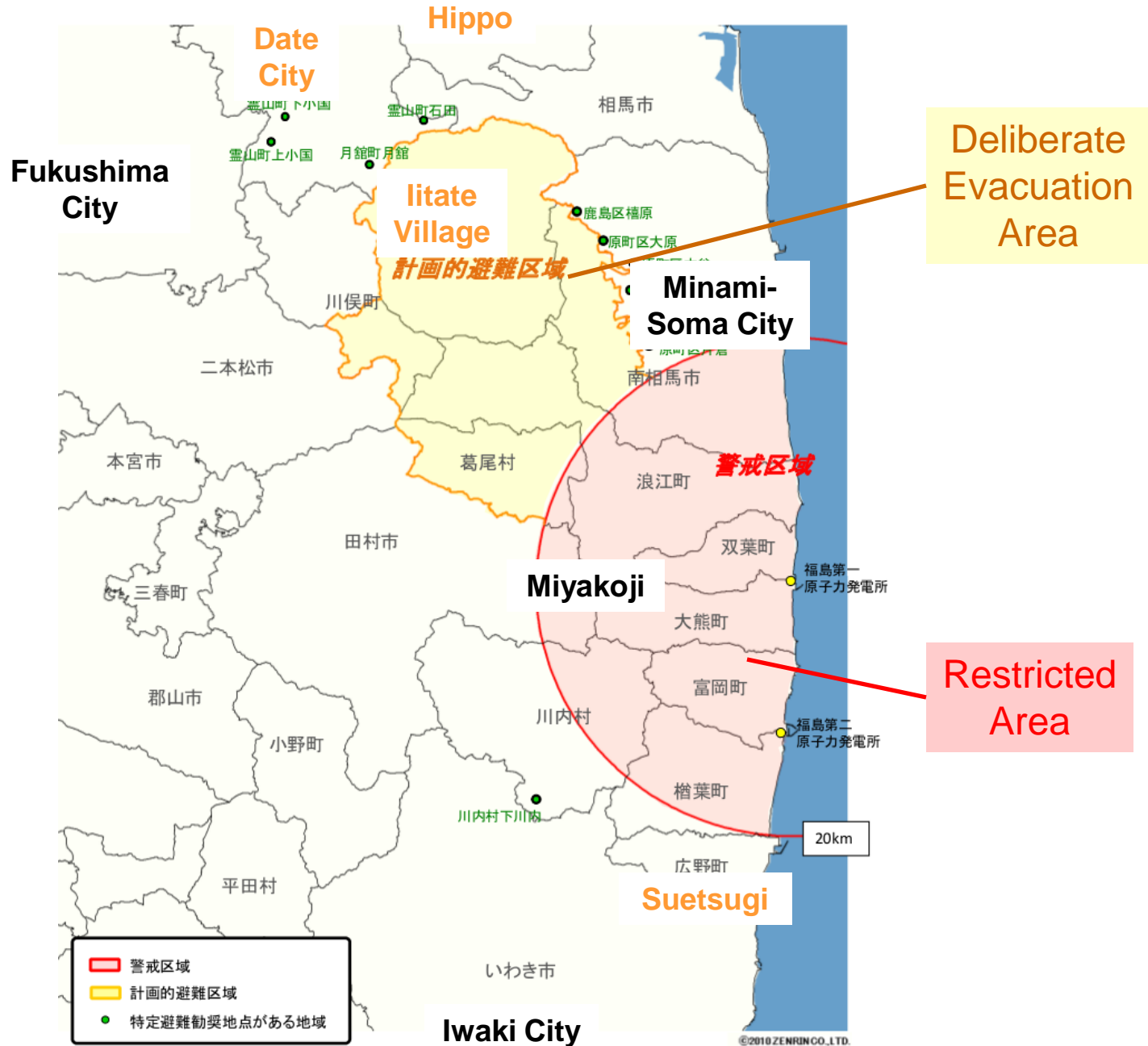


# **Lessons learnt by IRSN about the involvement of experts toward the population in contaminated areas in the Fukushima prefecture**

# **ICRP Dialogue Initiative for the rehabilitation of living conditions in contaminated territories after Fukushima accident”**

- Launched in fall 2011 with Japan Radiation Safety Forum
- Until fall 2015, twelve dialogue seminars gather local actors with experts from Japan and abroad to discuss their concerns and to share local initiatives
- Organised with the support of IRSN, ASN, NRPA and the Committee on Radiation Protection and Public Health of NEA/OECD
- Examples of topics : contaminated foods, raising children, culture,.. or focused on Date, Itate, Iwaki, MinamiSoma
- An international workshop will be held in Fukushima city in December 2015 to present and discuss the main lessons

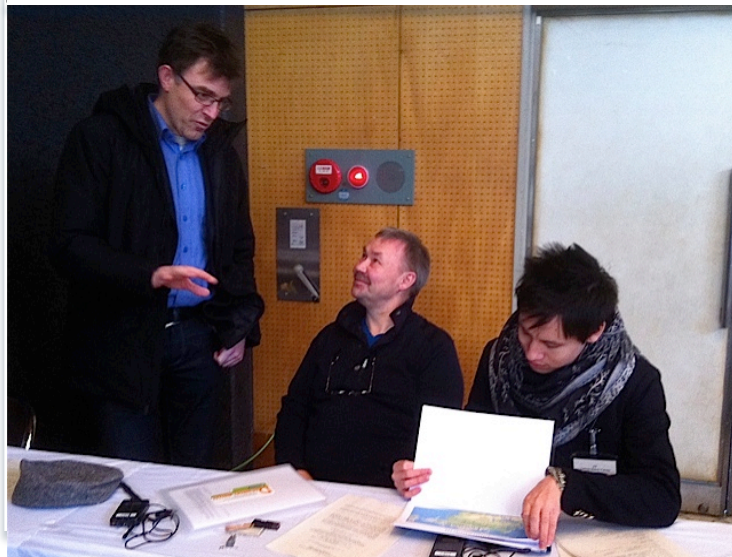


## Date city hall – February 2012





# ICRP Dialogue seminar – March 2013



# Analysis performed by IRSN and CEPN

- Launched in 2013
  - to identify the main lessons which can be learned from these dialogues and benefit to French IRSN experts in the event of a post-accident situation
  - to **raise awareness of IRSN experts about human dimensions** of post-accidental situations
- Done in cooperation with Japanese stakeholders and experts involved in the dialogues in Fukushima prefecture

## Major findings

- The human dimensions of the post-accident situation
- The stakeholder engagement: authorities, the public and experts
- The co-expertise process
- The development of the practical radiological protection culture

## The human dimensions

- The human consequences are very similar to Tchernobyl accident
  - Strong worry about health and especially of children health
  - But non only : the irruption of radioactivity is a rupture, which deeply upsets the relationship of man to himself, others and his environment → **total loss of control on daily life**
  - In addition loss of confidence in authorities and experts
    - Feeling of helplessness and abandonment
    - General feeling of discrimination and exclusion
  - The main key issues to be addressed by each inhabitant:
    - To continue to live in the affected territories or to leave them
    - To return or not at home for the evacuees



## The stakeholder engagement: authorities, the public and experts

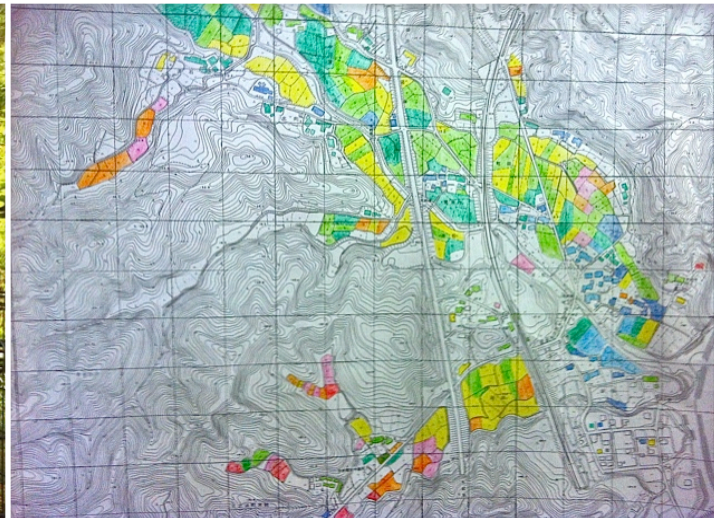
- Local authorities or local communities mobilized themselves to initiate actions with the help of experts personally committed
- Experience feedback from these experts
  - The major difficulty is to talk about the effects and risks associated with exposure to ionizing radiation :
    - be consistent with the scientific knowledge and modest with respect to the uncertainties and limits of knowledge
    - do not easily conclude that the situation is safe
  - Radiation protection is unavoidable but it cannot handle people's lives
    - Importance of focusing on individual data and their distribution within the community to be at their service
  - Respect the values and choices of each person

# The co-expertise process

- The process of co-expertise relies on:
  - Establishment of places for dialogue allowing experts to listen and discuss together with affected people their questions, concerns, but also expectations
  - Assessment conducted jointly by locals actors and experts (voluntary experts from various places and local professionals) on the situation of the people and their community
  - Importance of means to measure and characterize the radiological situation
  - Implementation of projects to address the problems identified at the individual and community levels with the support of local professionals, experts and authorities
  - Evaluation and dissemination of the results → importance of social media in Japan

# Meeting in Suetsugi with ICRP – July 2012

## Questions and concerns



# The development of the practical radiological protection culture

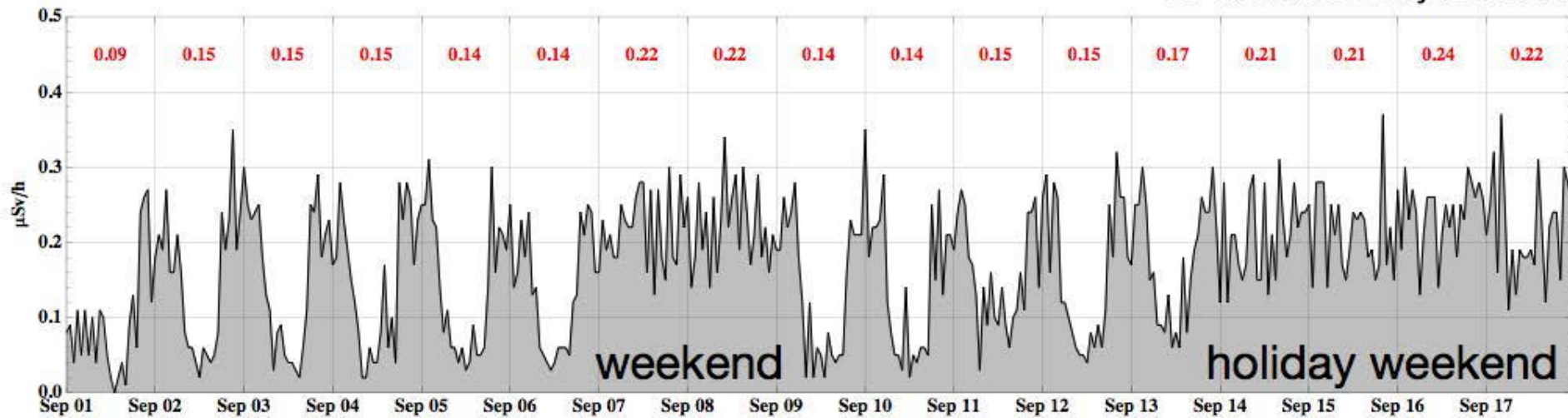
- Co-expertise leads to promote a practical radiological protection culture within the affected communities, defined as:  
*The knowledge and skills enabling citizens to make choices and behave wisely in situations involving potential or actual exposure to ionizing radiation*
- Access to measurements by the people with suitable devices is critical
- This progressively allows everyone to:
  - Interpret results of measurements
  - Build her/his own benchmarks against radioactivity in day-to-day life
  - Make her/his own decisions and protect her/himself and loved ones = self-help protection



# Personal dosimeter with 1-hour integrated-dose readout

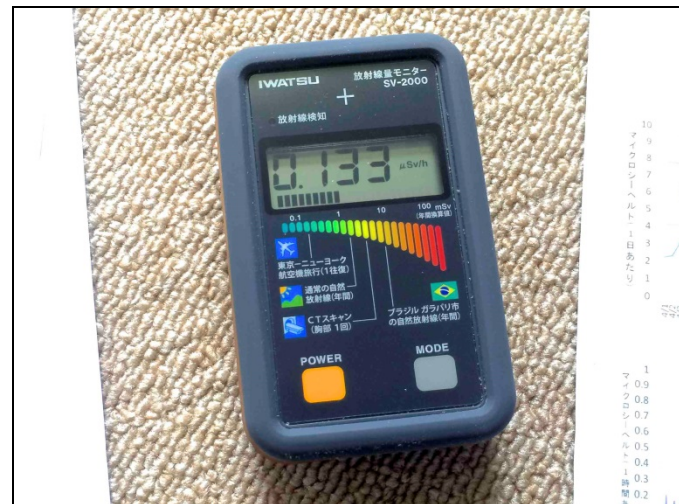


a Fukushima city resident



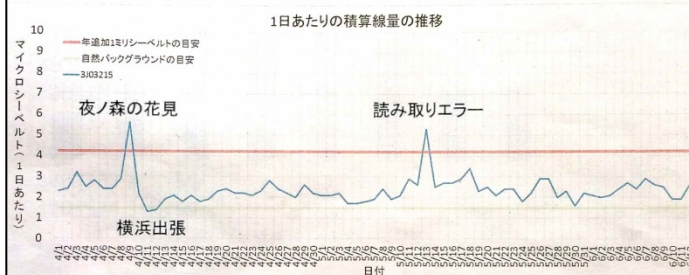


# Assessment of external exposure by citizens in Suetsugi

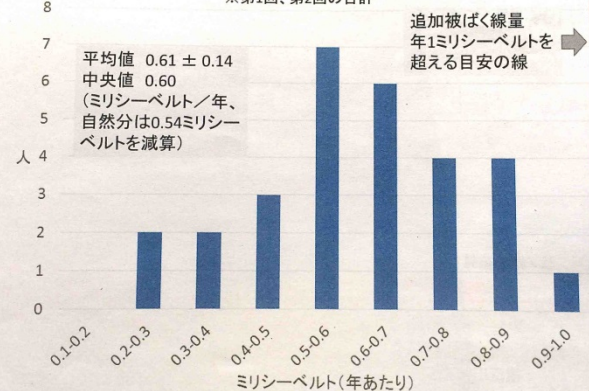


## 積算値を変える要因は生活にある

1日平均積算量 (マイクロシーベルト/日)	年間推測追加被ばく量 (ミリシーベルト/年)	参考: 前回の推測
2.40	0.33	-



## 年間追加被ばく線量の分布(推定、ミリシーベルト) ※第1回、第2回の合計



# Suetsugi - July 2013

## Measurements of the products of local gardens





# Suetsugi – March 2013

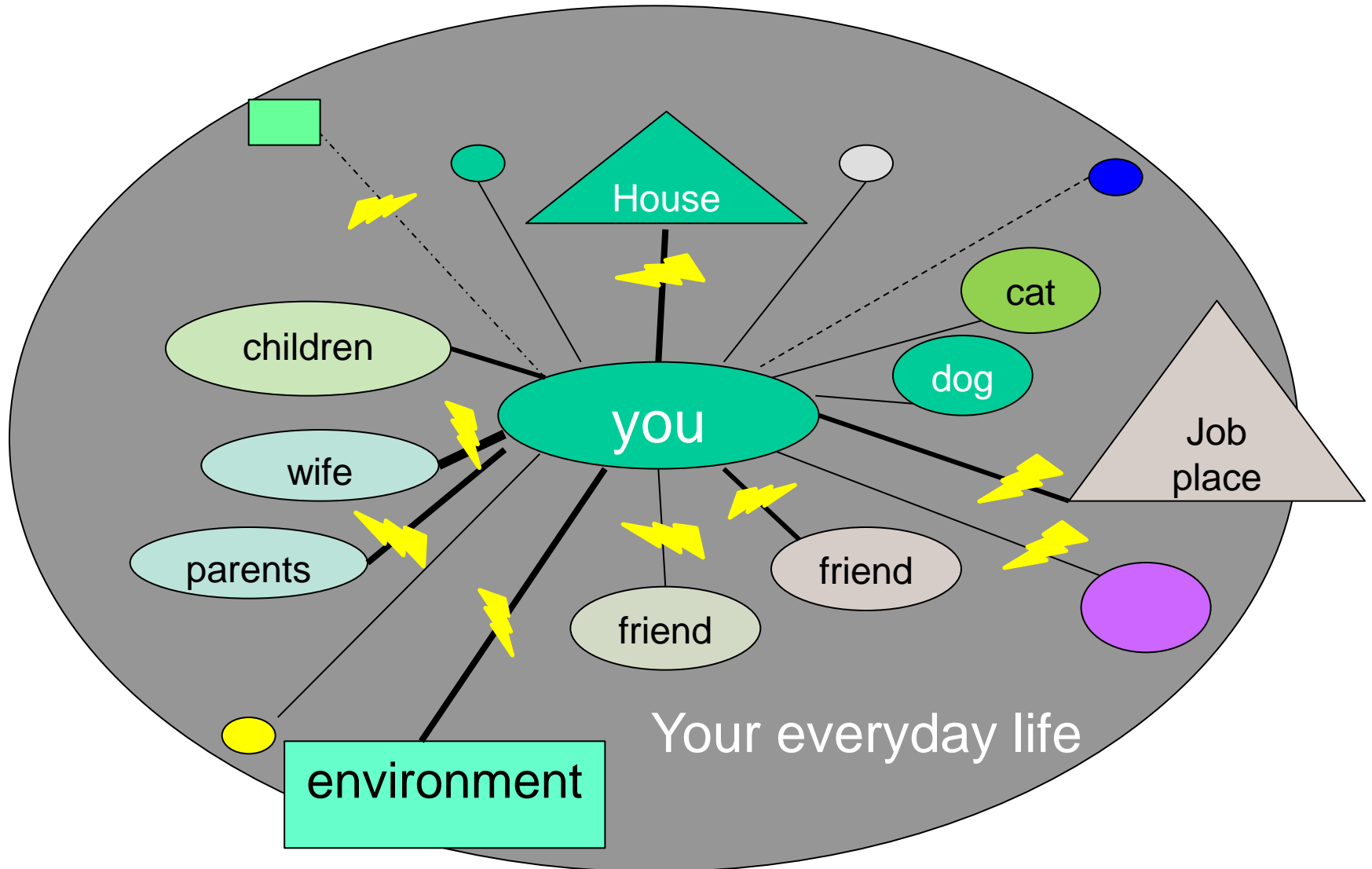
## Visit of the decontamination waste disposal site



## Tentative summary and challenges (1)

- Which role for the experts in post-accidental situation ?
  - The **co-expertise process is the key** to regain trust between authorities/experts and inhabitants. It relies on a **long term cooperation**.
  - To be helpful, scientist need to understand that, as necessary as **radiation protection** is, it is not the only problem inhabitants are facing and it **can not handle people's lives**. It must be at the service of individuals and the community.
- Should such a situation happen in France or in Europa
  - What would be the place at local level of a national expert, such as IRSN, ... ?
  - How can we prepare ourselves to this work with the population ?

# When radiation comes into your daily life (Pr. Othsura Niwa)





## What I have learned (Pr. Nobuhiko Ban)

- Our expertise do not cover all aspects
- People's perception is the reality
- Have and provide various viewpoints
- Know each one's situation
- Imagine unspoken words

# Development of the Babyscan



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# **BABYSCAN: a whole body counter for small children in Fukushima**

**Ryugo S Hayano<sup>1</sup>, Shunji Yamanaka<sup>2</sup>, Frazier L Bronson<sup>3</sup>,  
Babatunde Oginni<sup>3</sup> and Isamu Muramatsu<sup>4</sup>**

***THANK YOU***  
***FOR YOUR ATTENTION***