



Young Researchers' Association

9:40 am start(Session 3), 16 May 2017, at Lisbon Portugal,

17th European ALARA Network workshop on "ALARA in emergency exposure situations"

# Experience of Activities in Q&A about Radiation in Daily Life after Fukushima Daiichi Nuclear Power Plant Accident

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2) Japan Atomic Energy Agency

# Outline of presentation

1. Introduction
2. Activities using Question and Answer Website about radiation in Daily Life
3. Analysis of the questions and the questioners
4. Summary

# 1. Introduction

# Young Researchers' Association in JHPS(1)

- ▶ Young Researchers' Association(YRA) in Japan Health Physics Society(JHPS) since 1987 with 7 voluntary members
- ▶ About 40 engineers and researchers (as of April 2017) younger than 36 years old from private companies, research institutions or academia
- ▶ We specialize in radiation protection, environmental radioactivity, etc



Written by both  
Japanese and English



YRA homepage

<http://www.jhps.or.jp/wakate/english.html>

YRA Facebook page **Please like us!!**

<https://www.facebook.com/wakate.jhps/>

# Young Researchers' Association in JHPS(2)

## ► Our main purpose of activities

- 1) To exchange information and discuss latest knowledge about radiation protection among the members via periodical workshops and mailing list.
- 2) **To engage in educational activities on radiation protection to the public**
- 3) To cultivate domestic and international relationships with young people of other scientific bodies (like FAN)



## 2. Activities using Question and Answer Website about radiation in Daily Life



# Background

The Fukushima Daiichi Nuclear Power Plant accident happened. (11 March 2011)

Artificial radionuclides to the environment  
This fact made people upset and anxious.

Volunteers of JHPS built up a website named [Questions and Answers about Radiation in Daily Life](#). (from 25 March 2011)

For providing accurate information about radiation and radioactivity via website to the public

Steering Committee of this Q&A site was officially established in JHPS. (24 August 2011)

We describe an outline of the contents of questions sent to our Q&A website and experience of activities for about two years after the Fukushima accident.

# Q&A website in daily life of JHPS

暮らしの放射線Q&A  
日本保健物理学会

公開中: 1517件 最終更新日: 2012/4/11

放射線の人体への影響 放射線の食物への影響 放射線の水への影響 その他

Click!!

論文の信頼性、位置づけについて教えてください。  
[その他] (その他、リスク、情報提供、疑問、被ばく、被ばく線量、身体影響)  
4月11日掲載 神奈川県在住 10代学生 男性の方からいただいたご質問

5 ツイート 15

Question from questioners

暮らしの放射線Q&A  
日本保健物理学会

公開中: 1517件 最終更新日: 2012/4/11

放射線の人体への影響 放射線の食物への影響 放射線の水への影響 その他

Question

群馬県在住 70代 その他職業 男性の方からいただいたご質問

ICRP Pub172によると、たとえばセシウム134の実効線量係数は、 $1.9 \times 10^{-9}$  マイナス9乗となっています。この数値は、物理的半減期206年を考慮して50年間積分した値でしょうか。それとも、生物学的半減期100日をさらに考慮して積分した値でしょうか。もし生物学的半減期が考慮されていない係数の場合、被ばく評価に当たって、生物学的半減期を考慮して被ばく量を低減することは、通常行わないのでしょうか。

関連キーワード: 半減期、被ばく線量

Our answer

Answer

回答掲載日: 2012年4月11日

まず、ご提示の数値 ( $1.9 \times 10^{-9}$ ) について確認します。内部被ばくの経路は主に吸入と経口の二種類があり、ICRP Pub172では乳児・幼児～成人毎に線量係数 (単位: Sv/Bq) が示されています。ICRP Pub172でご質問中の数値を探しましたが、セシウム134では確認できませんでした (近いところで、成人の経口摂取で  $1.9 \times 10^{-8}$  Sv/Bq があります)。

預託線量は、ご質問の通り、成人においては通常50年間で受ける被ばく線量の積分値 (20～70歳) です。この線量には、生体組織・組織内での材料の吸収・分布・代謝・排泄も考慮されています。つまり、ICRP Pub172で示されている線量係数は、物理的半減期による減衰だけではなく、(生物学的半減期という名目ではありませんが) 体内の様々な反応も考慮した複雑なモデルから導かれた数値です。

Tweet number about 5,000 (As of March 2012)

お知り合い

- お詫びと訂正 (平成23年11月21日掲載の記事について) (2012/03/08)
- お詫びと訂正 (1月11日掲載の記事について) (2012/01/20)
- 回答掲載の遅れについて (2011/11/17)
- サイトリニューアルについて (2011/10/31)

更新情報はtwitter上でもお知らせしています

フォローする @radiinfo

488人フォロー中

このサイトを共有する

Example of Q&A on Website

The Top page on Q&A Website ( <http://radi-info.com/> ) (in Japanese)



# Steering Committee of Q&A site in JHPS(1)

Japan Health Physics Society

Executive Committee

Activity period:  
From August 2011 to March 2013

**Established in JHPS in 24 August 2011**

The committee Members (53 persons)

Breakdown:

- 5 Executive members
- 7 Senior Expert members
- **24 Young Researchers Association members**
- **17 Student's Association members**

**Steering Committee of Q&A  
about Radiation in Daily life**

Japan Standardization  
Committee on Radiation  
Protection

Foreign Affairs Committee

Editorial Board

Strategic Planning Committee

# Steering Committee of Q&A site in JHPS(2)

## The correspondence process of answering

1) Questions from the public

Q&A website about  
Radiation in Daily Life  
(<http://radi-info.com/>)

2) Confirmation  
of questions

10) Post the  
answers on  
the website

Secretariat

Steering Committee of Q&A about Radiation in Daily Life

Group to answer questions

6) Send the answers' drafts

Secretariat

7) Confirmation

9) Finalize the  
answers

Executive members

8) Final confirmation of answers

3) Assign questions

Secretariat

4), 5) Share questions, confirmation of experts

Group 1 (Monday)

Leader: 1 person

Sub leader : 1 person

Other : 2 persons

←→ 1 expert

Group 2 (Tuesday)

←→ 1 expert

Group 3 (Wednesday)

←→ 1 expert

Group 4 (Thursday)

←→ 1 expert

Group 5 (Friday)

←→ 1 expert

Secretariat sends questions every day to each group

# Steering Committee of Q&A site in JHPS(3)

## Basic stance of our committee for answering

- 1) **To answer politely all questions from questioners**
  - Do not ignore similar questions
  
- 2) **To say objective fact**
  - We calculate dose using reliable information and compare with scientific data.  
(Natural background and Epidemiological study)
  
- 3) **To say our idea indirectly**
  
- 4) **To commit final judgment to questioners**

# The publication of a book about Q&A website

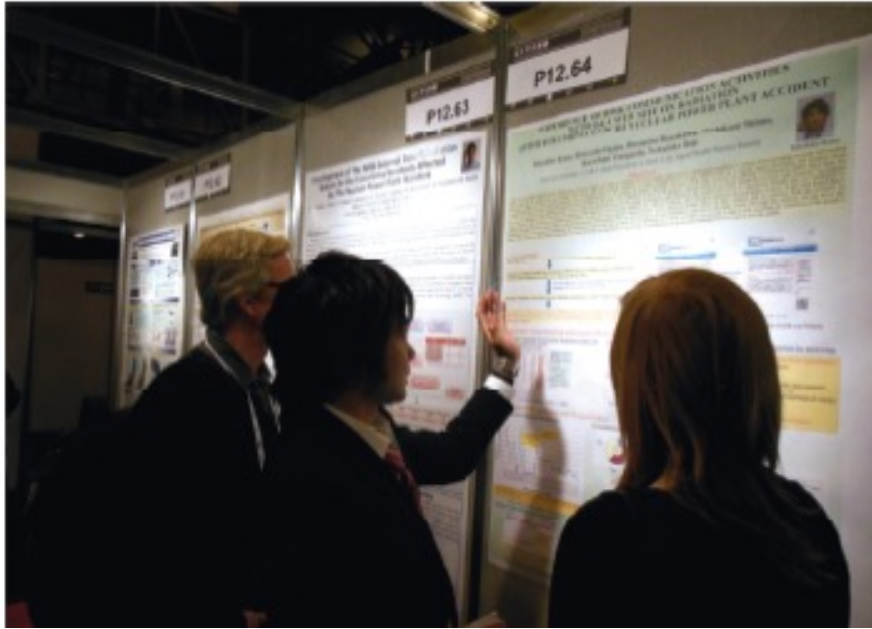


- JHPS published a book(in Japanese) on July 2013 for sharing the correct information on radiation and our activities for the two years.

This book mainly presents:

- The essence of all Q&A
- The result of the time series analysis of the questions and questioners
- The basic knowledge on general radiation protection

# The Presentation to IRPA-13 at Glasgow



- We presented our activity experiences after Fukushima Accident as a poster presentation in IRPA-13(May 2013) at Glasgow, Scotland.

-You can see our presentation on IRPA website as follows:

Poster presentation

<http://www.irpa.net/members/P12.64.pdf>

Proceedings

<http://www.irpa.net/members/P12.64fp.pdf>

**EXPERIENCE OF RISK COMMUNICATION ACTIVITIES AFTER FUKUSHIMA DAICHI NUCLEAR POWER PLANT ACCIDENT**

Takahiko Kono, Haruyuki Ogino, Hironobu Hayakawa, Michikuni Shimo, Kazumichi Taniguchi, Nobuhiko Ban  
Steering Committee of Q&A about Radiation in Daily Life, Japan Health Physics Society

**Abstract**  
After the Fukushima Daiichi Nuclear Power Plant Accident, which occurred on 11 March 2011 (hereafter referred to as "Fukushima accident"), we have been providing various information about radiation and related to the accident. Meanwhile, after the accident, voluntary Q&A about Fukushima Accident (Q&A) has been held as a website named "Question and Answer about Fukushima in Daily Life". The website received the question posed on the website. In Japan, Steering Committee of the Q&A website was officially established in 2012. Since then, the Committee has been engaged in the risk communication activities in the public. The committee consists of 10 members, among which are four young researchers and industry scientists in 2012. The answer to the question posed on the website are first prepared by the young researchers and divided to the reports who work as coordinators. Finally, they are confirmed by the steering committee of the committee.

**1. Introduction**  
The Fukushima Daiichi Nuclear Power Plant Accident occurred on 11 March 2011. Volunteers of Japan Health Physics Society (JHPS) held up a website named Question and Answer about Fukushima in Daily Life (http://www.jhps.or.jp/qanda/). For providing correct information about radiation and related to Fukushima accident to the public, Steering Committee of the Q&A was officially established in 2012 (from 22 August 2012).

**2. Activities using Question and Answer Website about radiation in Daily Life**  
We describe the results of the analysis of 1000 questions over the Q&A website, after the start of the new website of the question and answer for about one year after the Fukushima accident.

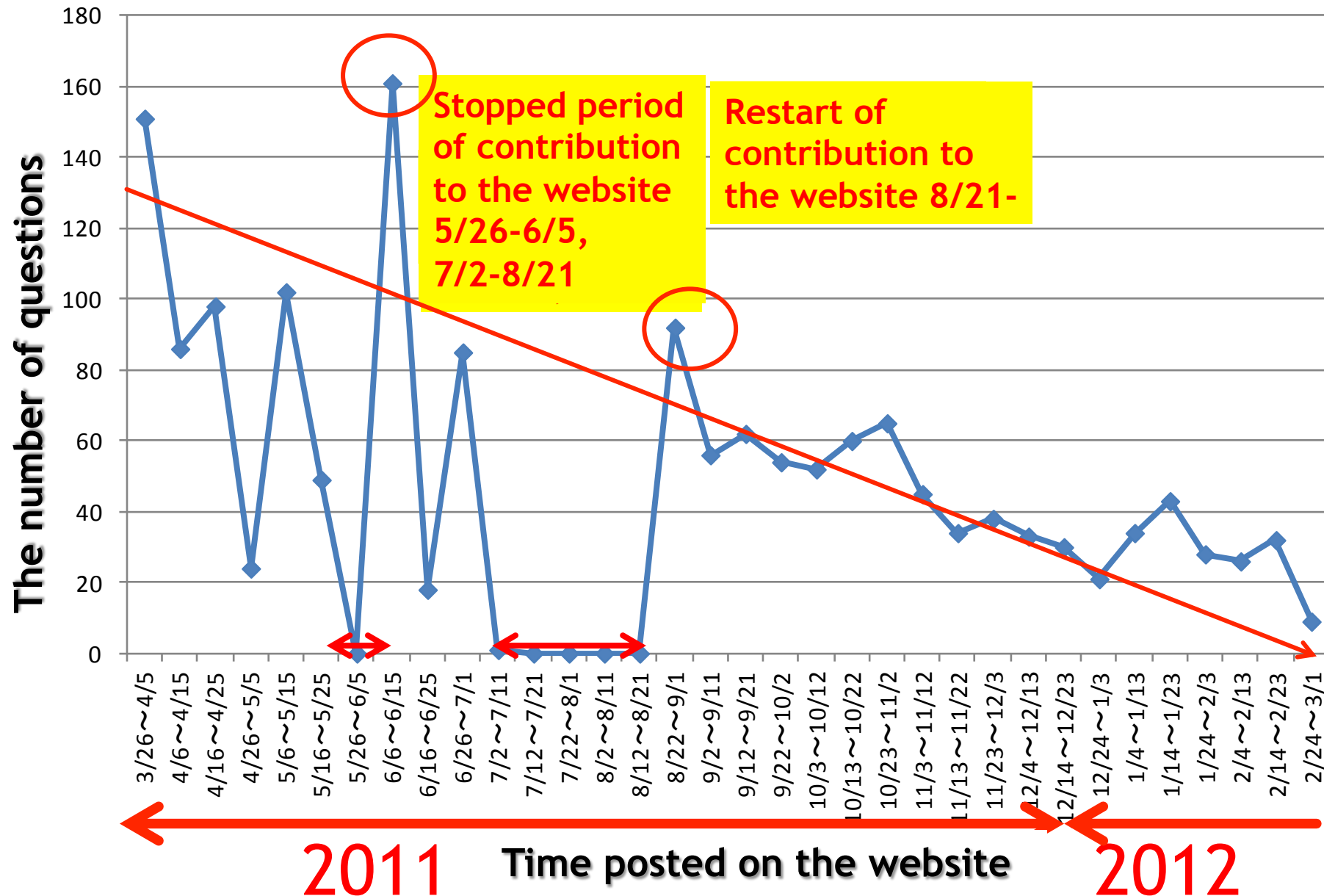
**3. Analysis of the questions and the questions**  
(1) Change of the number of the questions  
(2) A question's characteristics  
(3) Question contents

**4. Summary**  
• Most of questions were still due because in that 20% in 4th living in the Kanto region.  
• More concern occurred about the health effect due to radiation in a child.  
• The question content was gradually changed to the various field of the radiation.  
• The number of question in the website tends to decrease with age.  
• We are waiting on the publishing of the report Q&A.  
• We want to disseminate more experience of Fukushima risk communication with the website. Many other risk communication activities for Fukushima accident for the people in the world. We have been gradually able to contribute to reduction of the people's anxiety about radiation effect due to the Fukushima accident by Q&A. We will continue to respond from questions posed on the website.

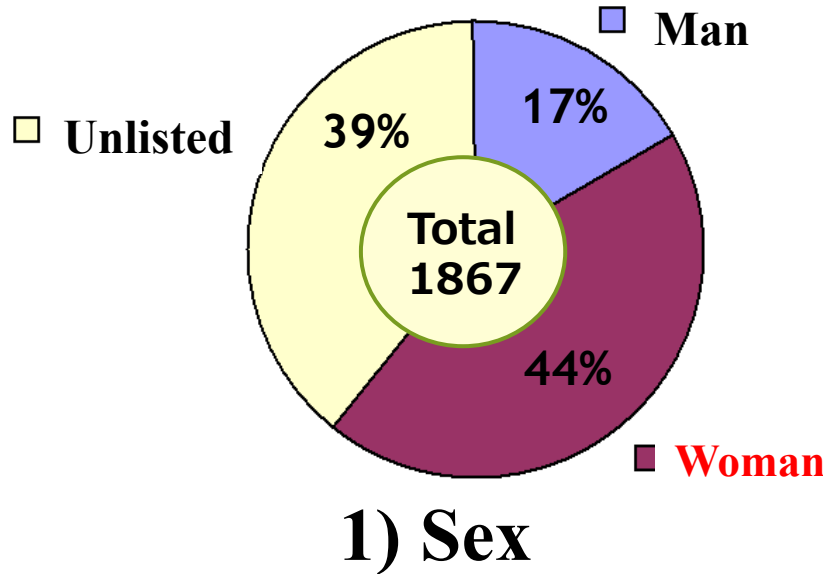


# **3. Analysis of the questions and the questioners**

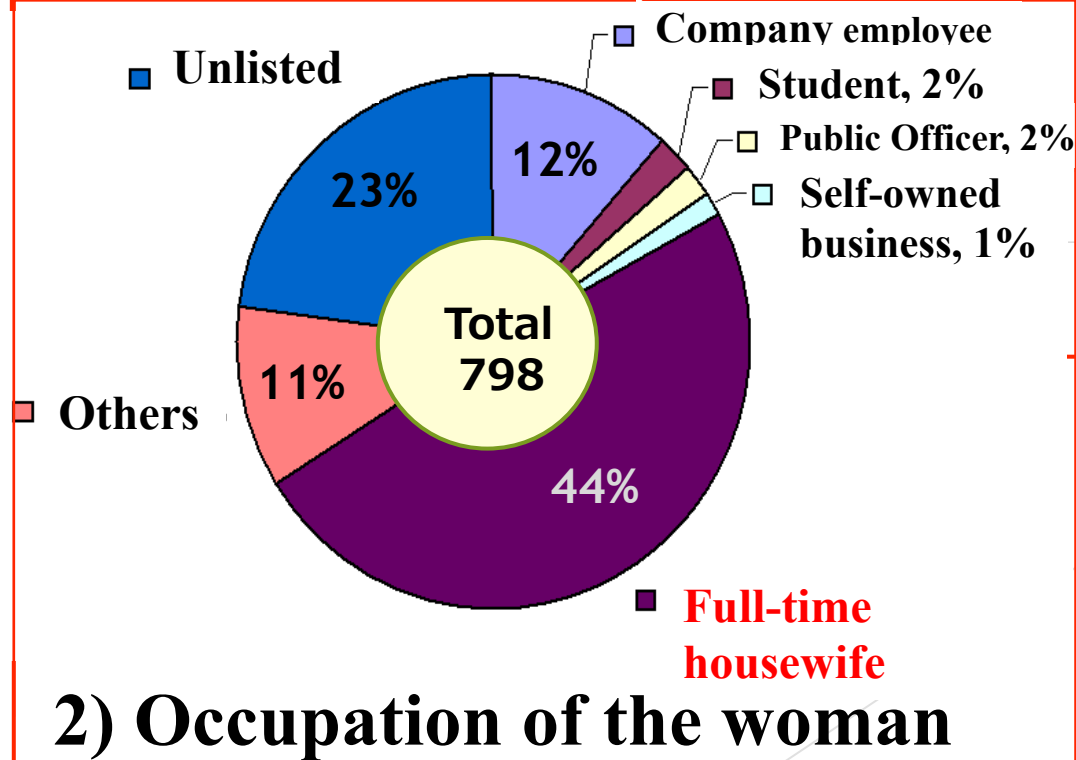
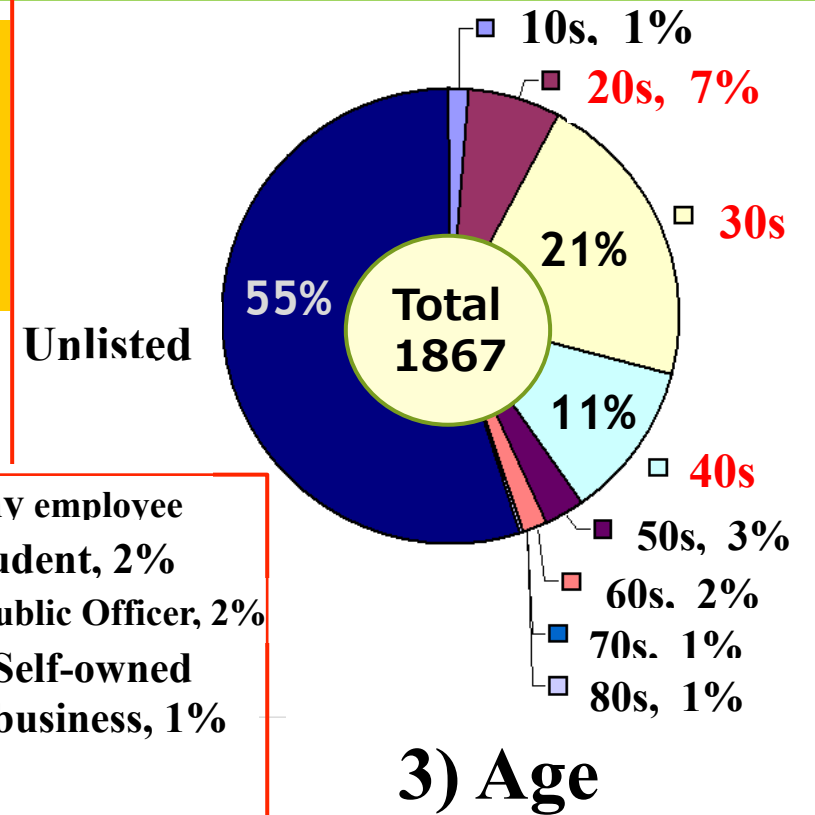
# (1) Change of the number of the questions



# (2) A questioners' characteristics



[Investigation period]  
March 2011- March  
2013 (for 2 years)

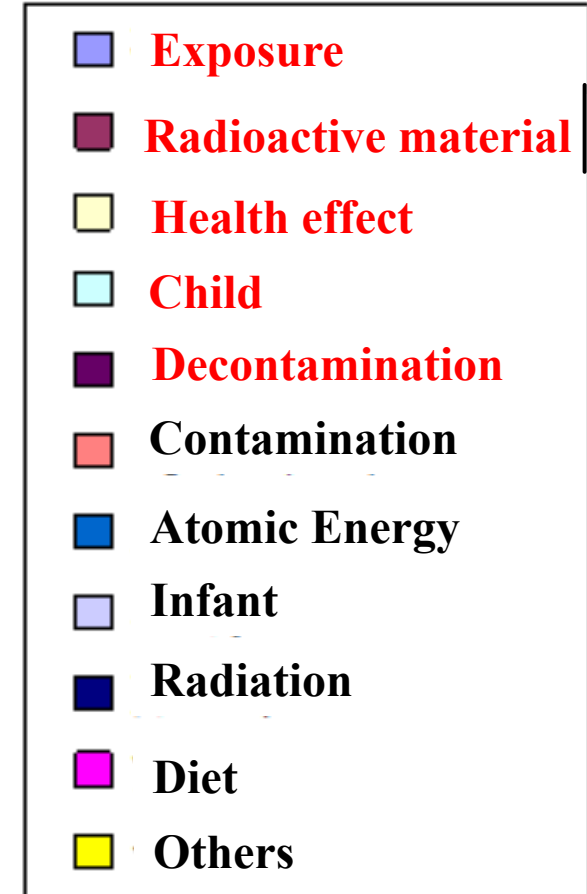
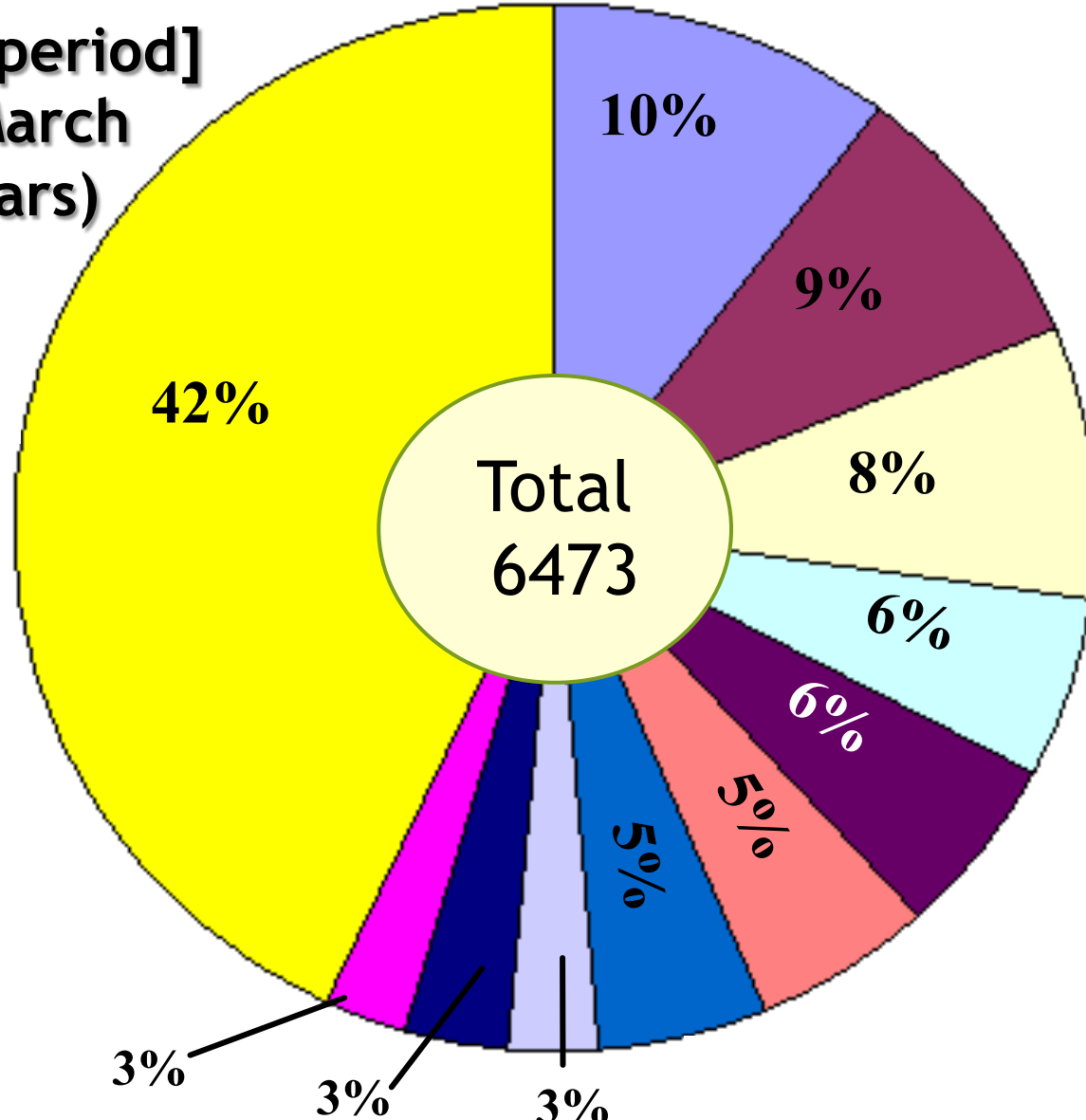


These data were based on self-reported results from questioners

# (3) Question contents

- We classified question contents from questioners based on 11

[Investigation period]  
March 2011- March  
2013 (for 2 years)



## (4) Main issues on the activities

▶ We couldn't confirm directly whether questioners were able to understand our answers because of answering questions via Internet.

⇒ Namely it was Not face to face.

▶ But we think it was good we answered questions rapidly and carefully right after the accident.

⇒ It was very important as responses to the public in the early stage after the accident.



# 4. Summary

# Summary

- ▶ Most of questioners were **full-time housewives in their 20s to 40s.**
- ⇒ Many women worried about **the health effects of radiation on their children.**
- ▶ These question contents were gradually changed depending on the circumstances of the accident over time.
- ▶ The number of questions to the website tended to decrease with time.
- ▶ We published a book about Q&As on July 2013.
- ▶ We believe our activities have been generally able to contribute to **reduction of the people's anxiety about radiation effects due to the Fukushima accident** by O&A website. It was confirmed by comments

# Thank you for your attention!!

My email address: [kono.takahiko@jaea.go.jp](mailto:kono.takahiko@jaea.go.jp)

I hope to keep in touch with you in the future!

## Appearance of main activities in YRA of JHPS

