



**2010 ISOE Asian ALARA Symposium
August 30- 31, 2010, Gyeongju, Korea**

**OUTLINE of OCCUPATIONAL
EXPOSURE at JAPANESE NPPs
in FY 2009 and
the ISOE ATC Activity**

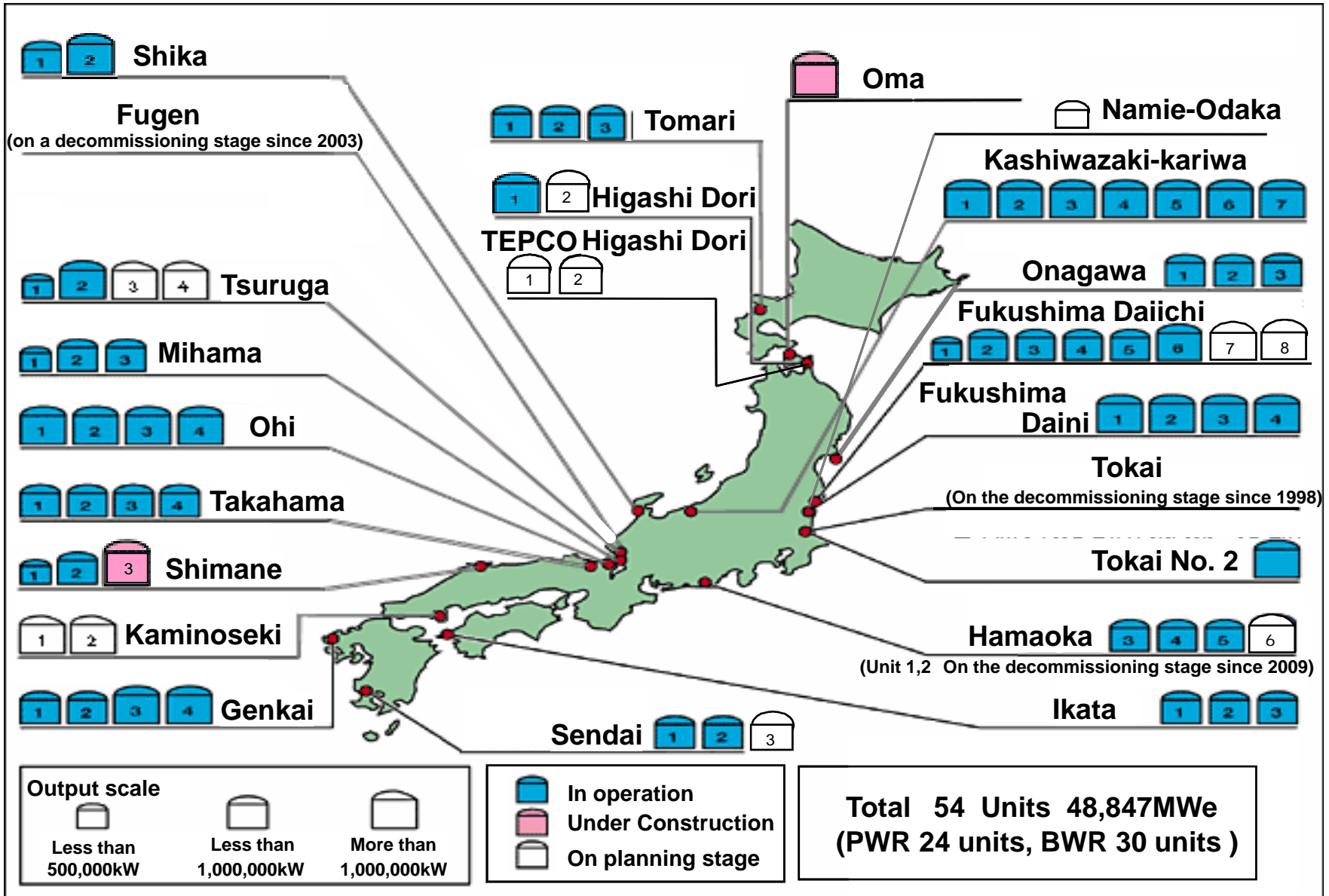
**Akiko SUZUKI
Nuclear Energy System Safety Division
Japan Nuclear Energy Safety Organization (JNES)**

Nuclear Power Plants in Japan

as of January 1, 2010

		BWR	PWR	Total
In Operation	No. of Units	30	24	54
	Output (MWe)	28,569	20,278	48,847
Under Construction	No. of Units	2	0	2
	Output (MWe)	2,756	0	2,756
On Planning	No. of Units	9	3	12
	Output (MWe)	11,886	4,666	16,552

Nuclear Power Plants in Japan



Nuclear Power Plants in Japan

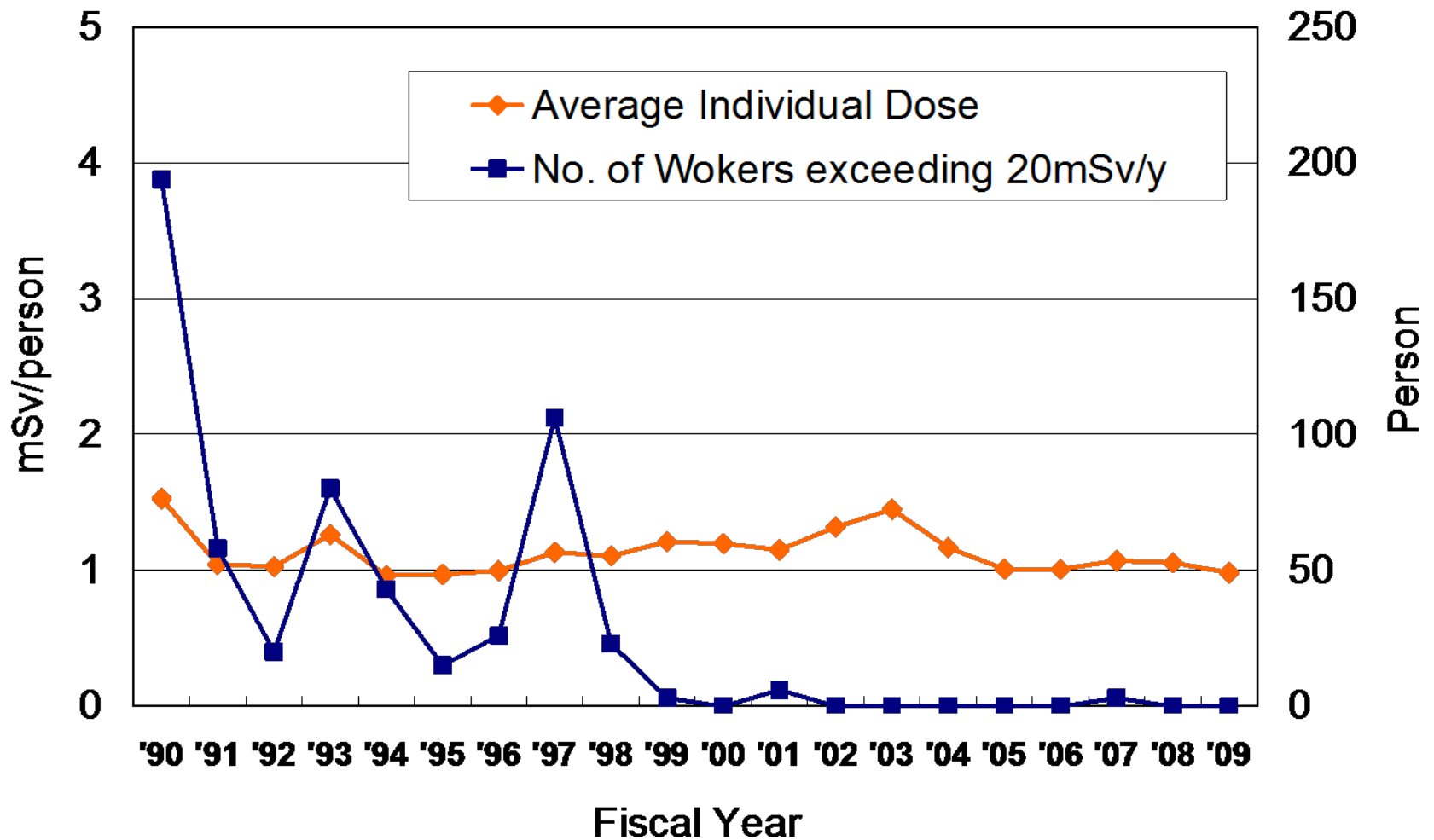
Average Individual Dose in Fiscal Year 2009 (April 2009 – March 2010)

Plants	Units	Persons	mSv/person
BWR	32 ¹	52,920	0.8
PWR	24	28,876	1.3
LWR (BWR+PWR)	56	81,796	1.0

1. Includes Hamaoka Unit No.1 & No.2 in BWRs that have been decommissioning since Nov.18,2009.

Nuclear Power Plants in Japan

Trend of Average Individual Dose



Nuclear Power Plants in Japan

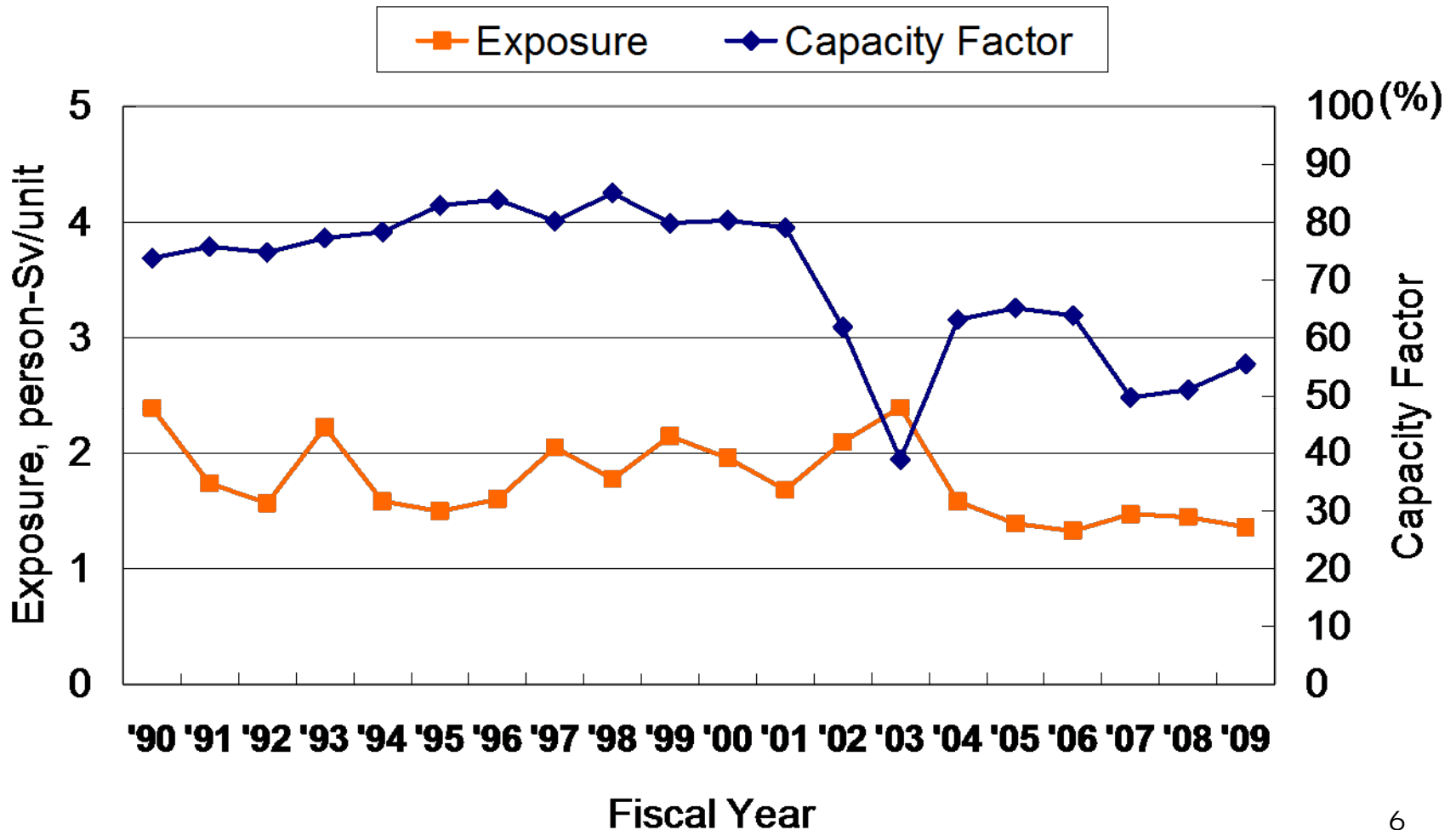
Collective Dose in Fiscal Year 2009 (April 2009 – March 2010)

Plants	Units	Person-Sv	Person-Sv/Unit
BWR	32 ¹	43.50	1.36
PWR	24	38.56	1.61
LWR (BWR+PWR)	56	82.06	1.47

1.Includes Hamaoka Unit No.1 & No.2 in BWRs that have been decommissioning since Nov.18,2009.

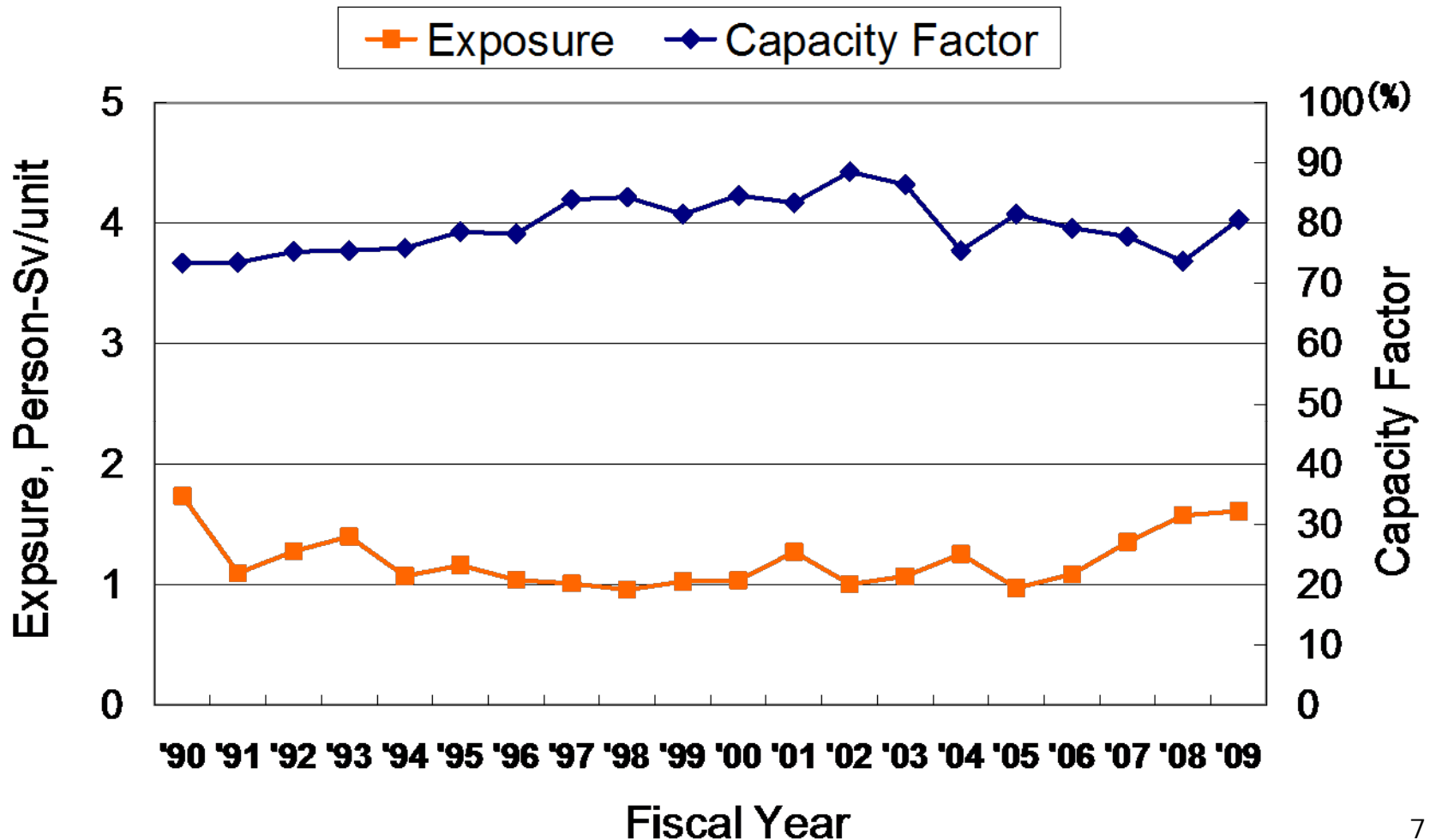
Nuclear Power Plants in Japan

Trend of BWR Average Collective Dose and Capacity Factor per Reactor

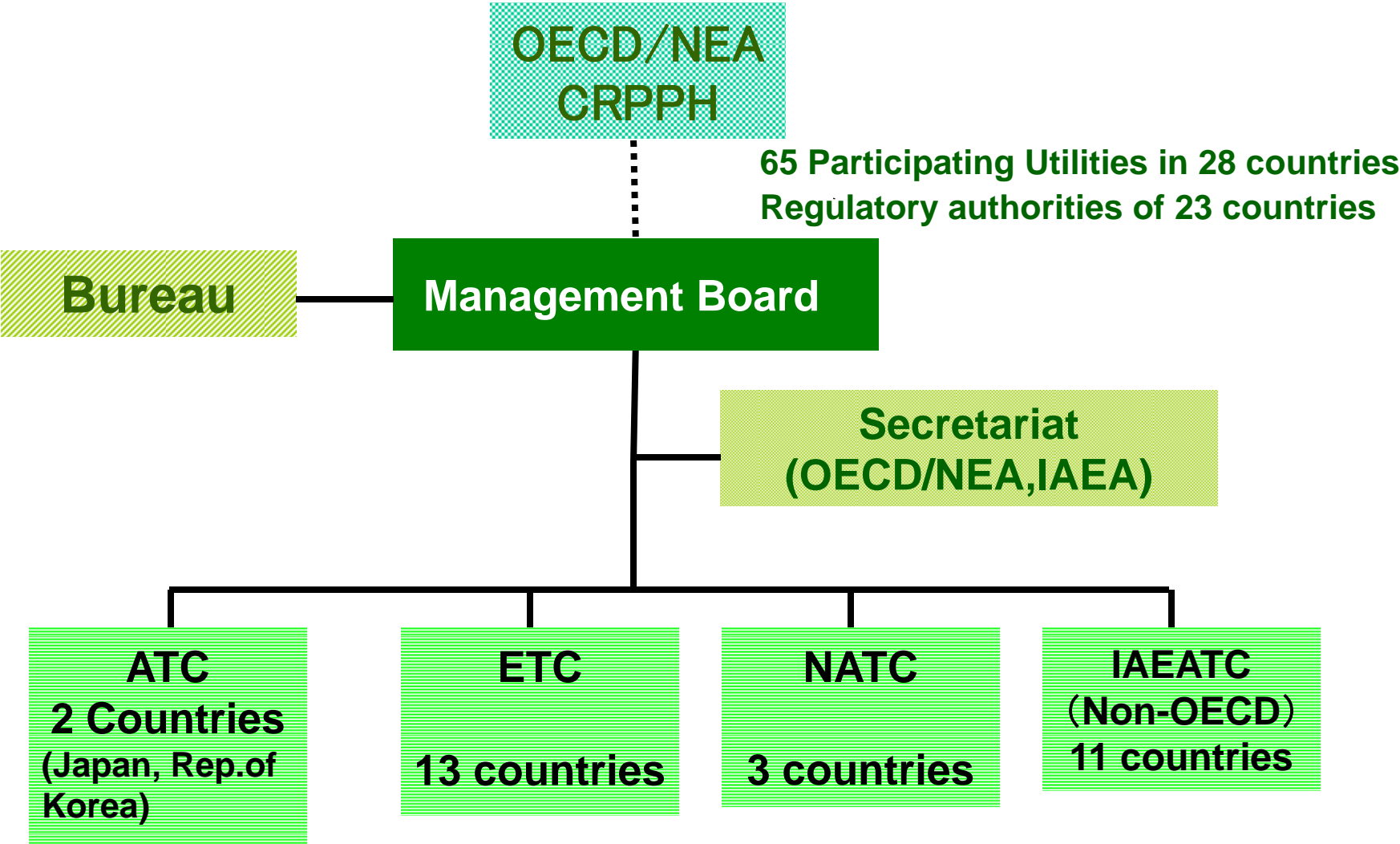


Nuclear Power Plants in Japan

Trend of PWR Average Collective Dose and Capacity Factor per Reactor



ISOE Structure



Activities of the ISOE-ATC

1. Data Collection: **ISOE database**
2. Evaluation & Analysis of dose trend in Worldwide by using ISOE Data
3. Information Exchange between ISOE
Participants: **RP forum**
4. Preparing Information Sheets (Korean ver. & Japanese ver.)
5. ISOE-ATC Website

ISOE Network – Data collection

Language: en [suzukia] Akiko SL

ISOE

ISOE 1
Questionnaires

- Database
- Create
- Export

Statistics

- MADRAS

Contact

ISOE > Questionnaires > ISOE 1 >

Workflow

This will send an email to:

Current state: **Unit**

Submit for validation

Utility

ATC

ETC

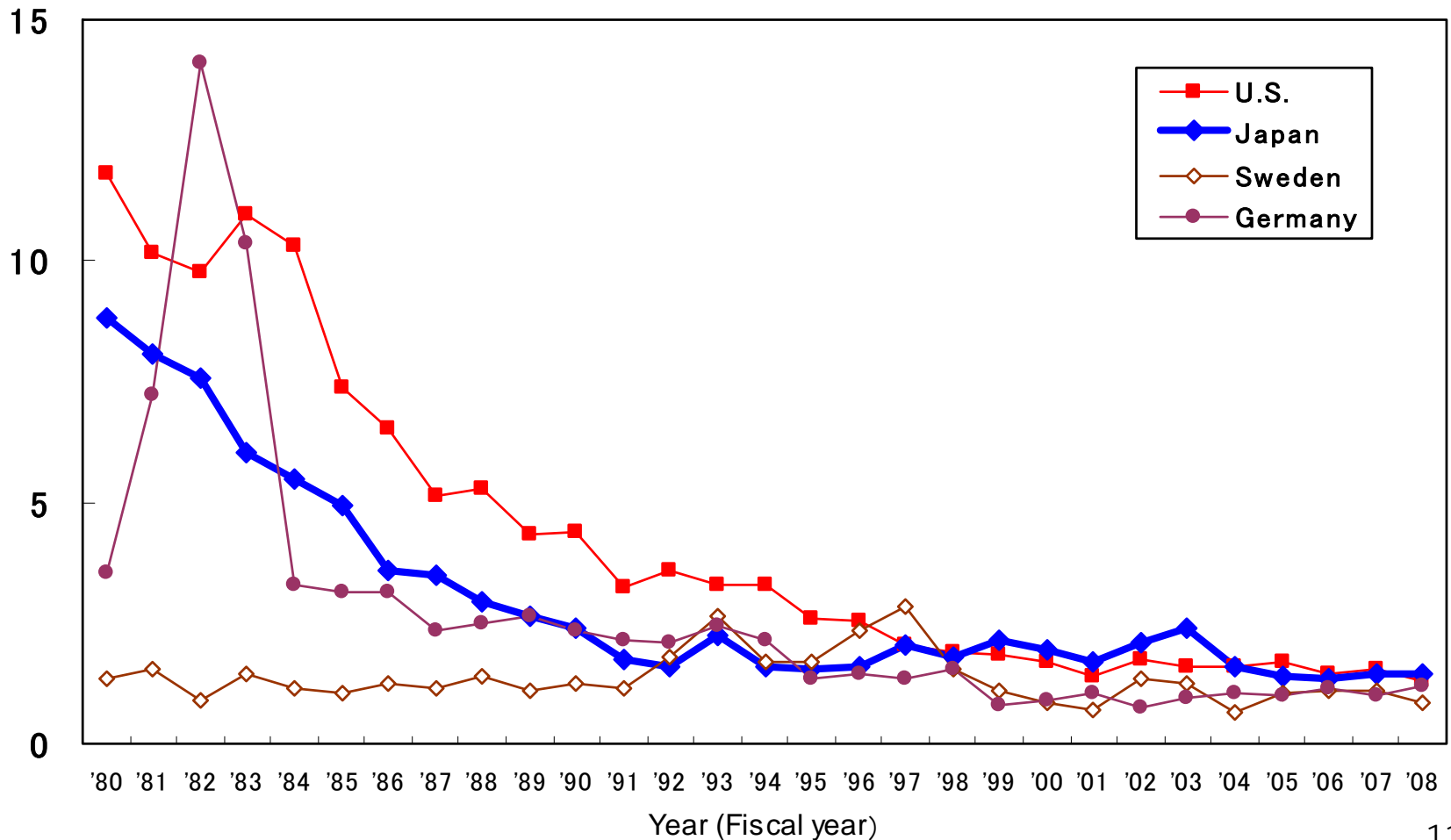
Comments to be added to the email message

Cancel

The figure describes the questionnaire data validation process.

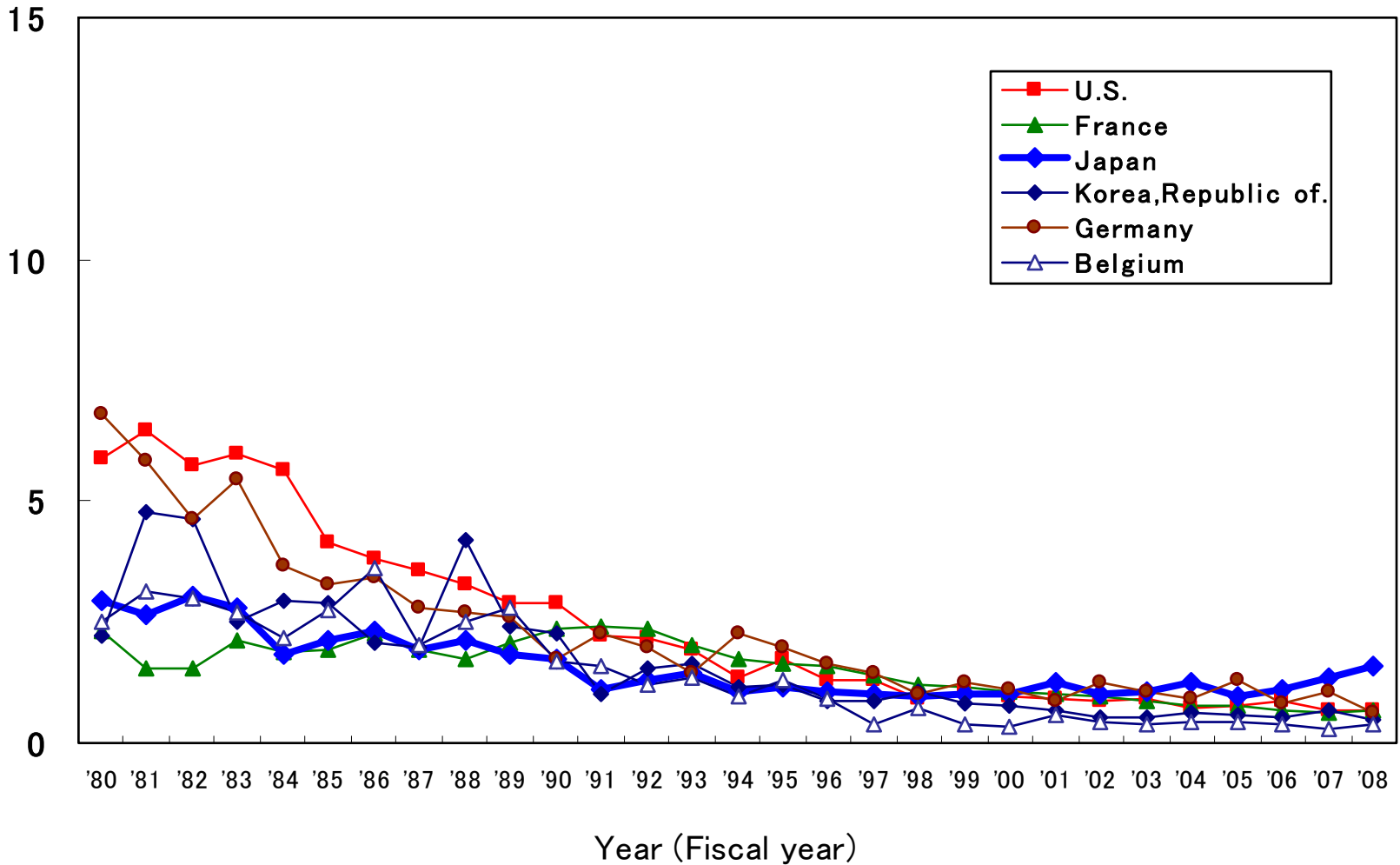
BWR Average Collective Dose per Reactor by Country(1980-2008)

(Person.Sv/ unit)

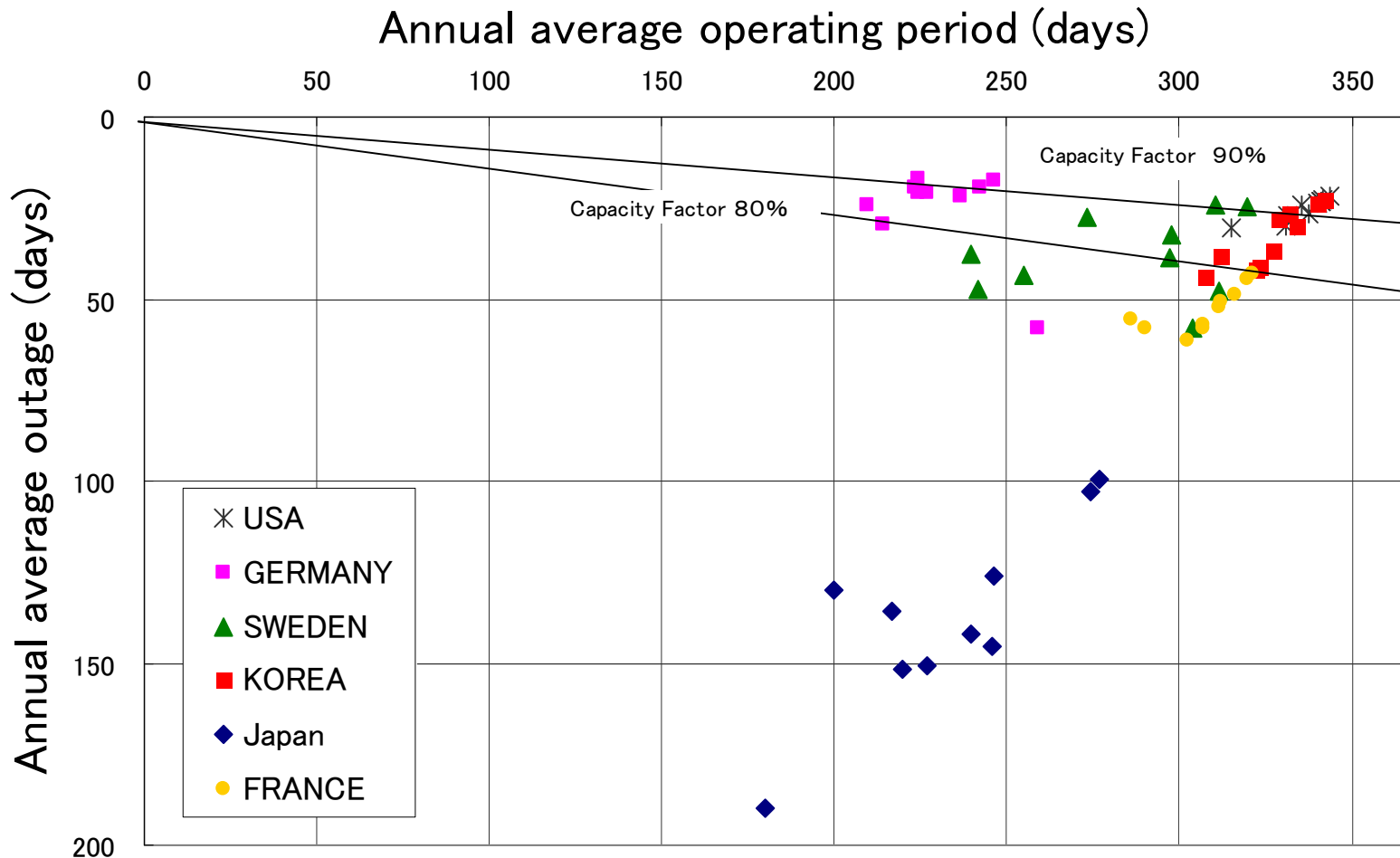


PWR Average Collective Dose per Reactor by Country(1980-2008)

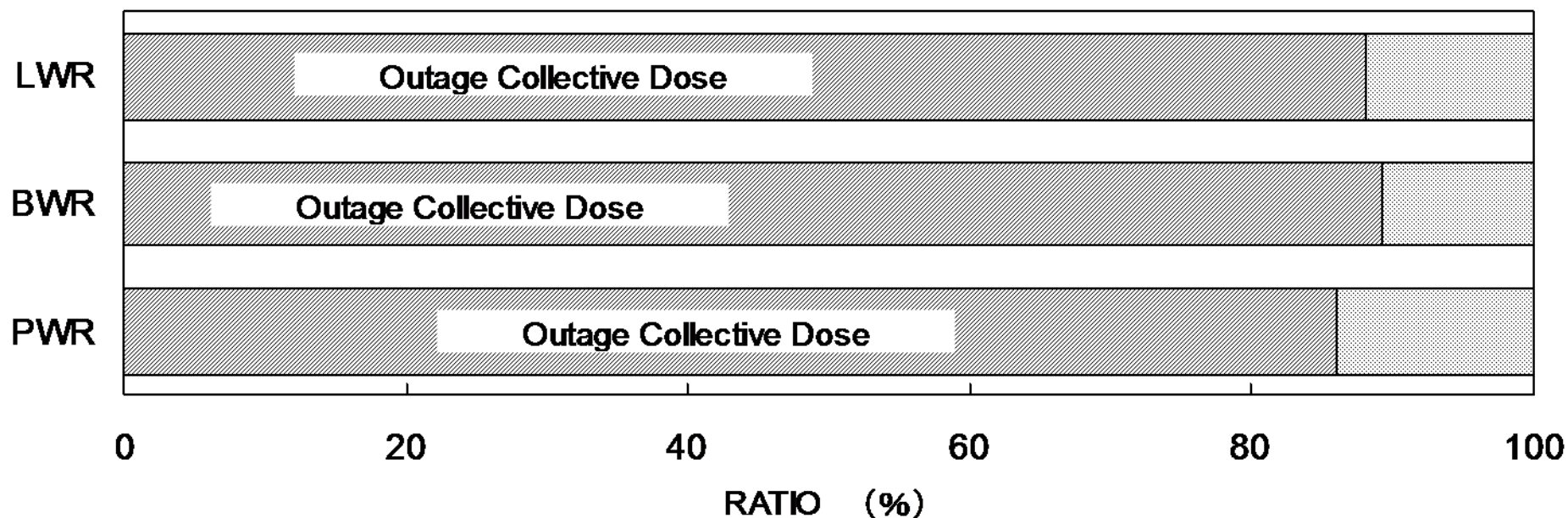
(Person.Sv/ unit)



Annual average of the operation period and maintenance period by country (1999 – 2008)



Contribution of outage collective dose to total collective dose for Japanese NPPs (2004 – 2008)



RATIO: Outage Collective Dose/Total Annual Collective Dose

Analysis

- ATC evaluated based on ISOE Database
 - outage RWP man.hours
 - outage dose by job
 - outage dose rate information

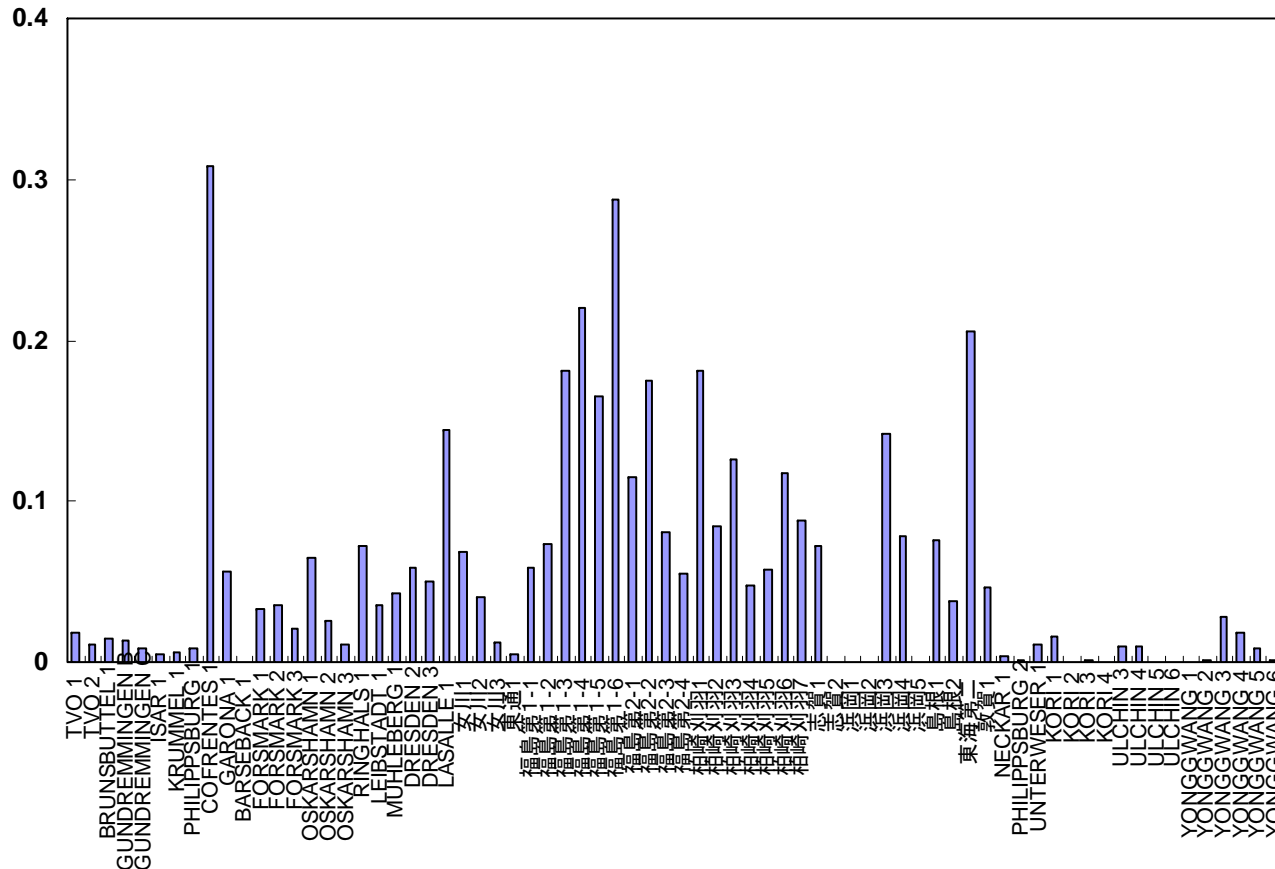
Action

- ATC contacts each ISOE national coordinator to investigate the differences in outage work scope.

The ISOE database

Average collective dose by Job (CRD) per outage (2004-2008)


(person.Sv)




Problems in comparing the exposure by Job/ task

- Scope of Job/ task lack clear definition
- The number of units that input data is insufficient

ISOE Network – RP forum



ISOE Network
Information System on Occupational Exposure



Home
About ISOE
Symposium
Publications
RP Contacts
Management
RP Library
Database
RP Forum

Home > RP Forum

“ Neither the OECD/Nuclear Energy Agency nor the IAEA assumes any responsibility for the accuracy, completeness or usefulness of the information provided through the RP Forum nor does either Agency necessarily endorse the views contained therein. ”

















[Advanced search](#)

Board index < ISOE Members < Utilities only
▼▲

Utilities only

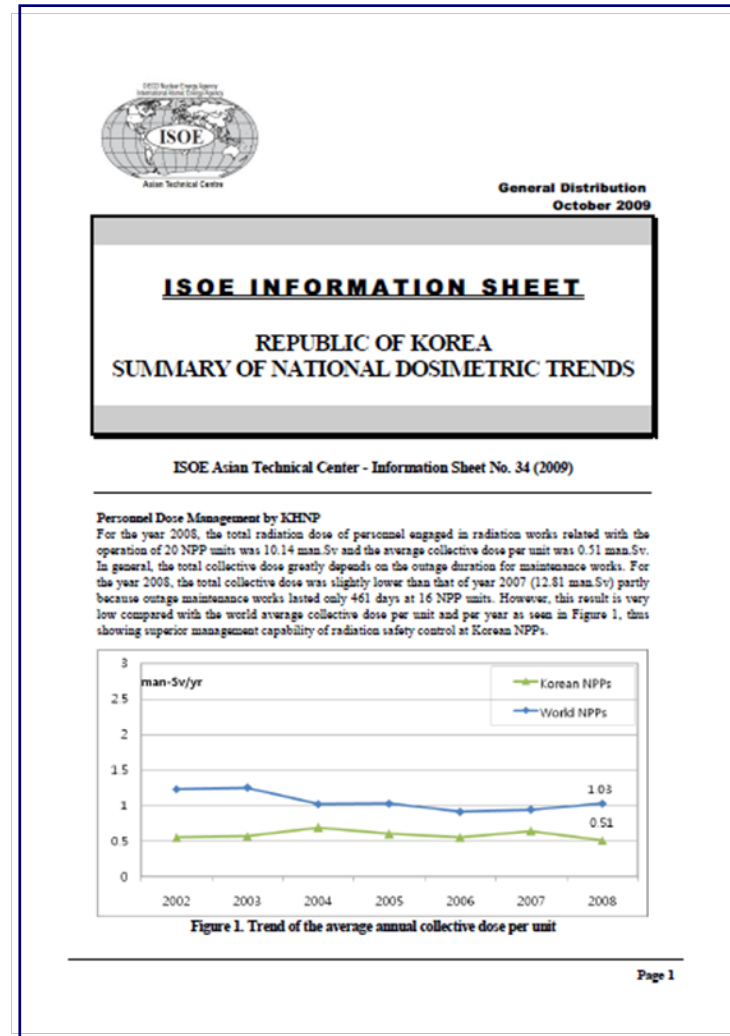
NEWTOPIC*

[Mark topics read](#) • 25 topics • Page 1 of 1

TOPICS	REPLIES	VIEWS	LAST POST
 Smoking in controlled zone by leduc > 09 Jul 2010 14:11	1	6	by millerdw  15 Jul 2010 15:05
 Background correction for individual monitoring of Hp(10) an by svedberg > 10 May 2010 09:33	16	45	by dascenzo  08 Jun 2010 10:45
 RP Cavity Survey Practices after Drain Down - Kewaunee by millerdw > 30 May 2010 22:20	1	22	by svedberg  01 Jun 2010 09:45
 Counting of Alpha Contamination Smears by millerdw > 17 May 2010 16:52	9	36	by rittera  25 May 2010 08:26
 Use of a Daily Dose Limit by renn > 09 Feb 2010 11:48	20	115	by rosellh  18 May 2010 12:36
 Kr85 and As76 in radioactive releases by dobis > 08 Apr 2010 19:21	10	30	by rosellh  16 May 2010 12:19
 RP-indicators by svedberg > 29 Sep 2009 05:33	9	76	by badajoz  22 Apr 2010 13:54
 Contamination management indicators			by badajoz 

Information Sheets

- ATC is responsible for preparing Information sheets on the Republic of Korea and Japan.
- The annual topic
- The special topic



ISOE-ATC Web site

ATC Database

<http://www.jnes.go.jp/iso/english/>

- The data for Japan, Rep. of Korea and Taiwan.
- The data for Japanese Nuclear Facilities, including Fabrication facilities, Reprocessing facilities, Waste burial facilities and Waste management facilities.

ATC plans for the future ...

- Enhancement of use the RP forum in ISOE Network.
- Promotion of linkages in Asian countries that don't belong to ISOE-ATC, such as China, India, Pakistan and Taiwan etc.
- Ongoing exchange of experience and knowledge in occupational exposure reduction at NPPs at the Asian ALARA symposium.

*Thank you for your
attention !!*